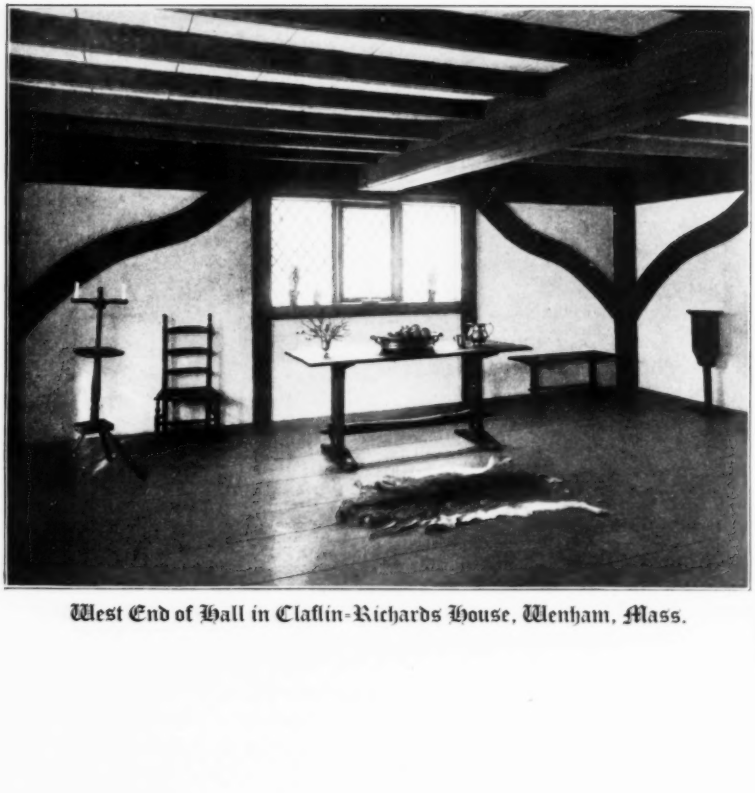

West End of Hall in Claflin-Richards House, Wenham, Mass.

Old-Time New England

THE BULLETIN OF

The Society for the Preservation of New England Antiquities

A QUARTERLY MAGAZINE
DEVOTED TO THE ANCIENT BUILDINGS, HOUSEHOLD FURNISHINGS, DOMESTIC ARTS, MANNERS AND CUSTOMS, AND MINOR ANTIQUITIES OF THE NEW ENGLAND PEOPLE

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The Claflin-Richards House, Wenham, Mass.

By Mrs. E. B. Cole

THE Claflin-Richards house is the oldest of the three seventeenth century houses remaining in the town of Wenham; its interesting history and its location in the centre of the town have always been a strong appeal for its preservation. Since its purchase by the Historical Association, four years ago, necessary repairs have disclosed a type of construction rare among surviving New England seventeenth century houses, which adds to its interest. As a result of its location and the public spirit of its various owners,—ministers, doctors, schoolmasters and men of affairs,—the house has been an important center of the village life.

The beginnings and early history of this ancestral home of the Claflin family are not lost in tradition or the result of someone's "deductions," but are plainly set forth in the records of the town of Wenham.

"4th November 1661, Robert Macklafflin is accepted a townsman."

This simple statement in the town records is the beginning of the history of the Claflin family in America, and of the story of the old house.

It is quite probable that Robert Macklafflin was one of the Scotch prisoners captured by Cromwell at the battle of Dunbar in 1650, and sent to New England, consigned to "Tho. Kemble of Charlestoune to work for the iron Undertakers in Lin." The Rev. John Cotton, writing to Cromwell of these Scotchmen, in May, 1651, says, "But they have not been sold as slaves to perpetual servitude but for 6–7–8 years, as we do our own."

Robert Macklafflin seems to have been sent to Wenham, where, ten years later, he became a land owner. "At a towne meeting 6 of 11 1661 there is also granted to Robert Macklafflin a percill of lande be it more or less, lying betwin Mr. Fisks farm and Richard Kembles, joyning to Mr. Fisks medow, prouided it exceed not two acres."—*Wenham town records*, Vol. 1, page 26.

The house that was built upon this lot was the westerly end of the present house, with the door facing southwest, on the road that passed the church on Tarr's hill. Here he brought his bride, Joanna Warner of Ipswich, in 1664,

West Chamber of the Claflin-Richards House, Wenham

SHOWING ITS PRESENT APPEARANCE WITH THE FINISH ADDED ABOUT ONE HUNDRED YEARS AGO

and here his three oldest children were born.

Ten years later the town felt the need of such a house to attract a permanent pastor and on the 6th of January, 1672, a committee was chosen to "joyne with the Selectmen to make a Bargaine in the Behalfe of the town with Robert Macklafflin about his howse & land and to laye him out land of the towne Comon in consideration of it." The negotiations appear to have been protracted and it was not until 1673, that the town voted to buy the "howse and three akers of land Joyneing thereto with Hortyard (orchard) and fences thereto belonging in exchange for 15 akers upland and swamp lying at the Neck, be it more or less" and Robert Macklafflin moved to the Neck. The site of this new home, where his seven children grew to maturity, is unknown. Daniel, alone of all his children, remained in the town, but in 1724 he moved to Hopkinton so that only this old house is left as a monument to the three-quarters of a century that the Claflins (the "Mac" was dropped from the name after the first generation) were a part of the village life. The town and county records testify to the versatility of Robert Macklafflin. As a soldier he served under Sir Edmund

East Chamber of the Claflin-Richards House

SHOWING 18TH CENTURY PANELLING IN THE 1673 EXTENSION

Andros (*Essex Probate Records*) and his eldest son, Robert, died fighting under Sir William Phips in 1690; his appointment as surveyor indicates the confidence and esteem of his fellow citizens; his bark mill, tan vat and brick yard bear witness to his resource and energy and the refinements of the hewn timbers in the old house are silent evidence of his education and breeding.

Rev. Joseph Gerrish accepted the call to come to Wenham as pastor in May, 1673, and after many votes as to providing him with a house, the final decision appears to have been as follows: "29th of the 5th mo, the towne voated to Build a howse 18 foot square and 13 foot stud to be added to Robert's howse and the committee above mentioned are to carry it on." — *Wenham town records*, Vol. I, page 38. Here we have the exact dimensions of the easterly end of the present house, which, as a whole, now becomes the "Manse."

For forty-seven years Mr. Gerrish was the beloved pastor of the town. His kindly spirit made of his home, this old house, a meeting place for his parishioners who at this time faced the demands of King Philip's war and passed through the black period of Salem witchcraft.

Mr. Gerrish moved to a new parsonage in 1693, but this was long ago destroyed by fire and it is to this house, where he spent the twenty most active years of his pastorate, that the spirit and traditions of his long service cling. John Dunton, an Englishman, who visited Mr. Gerrish in 1683, thus writes: "When we came to Wenham, which is an inland town well stored with men and cattle, we paid a visit to Mr. Gerrish, the present minister of the place. Wenham is a delusive paradise; it abounds in all rural pleasures and I would choose it above all other towns in America in which to dwell. The lofty trees on each side are a sufficient shelter from the winds and the warm sun so kindly ripens both fruit and flowers as if the spring, the summer, the autumn had agreed together to thrust winter out of doors."

When pastor Gerrish removed to the new parsonage in 1693, this house was purchased by Capt. Thomas Fiske, the leading military man of the town, probably attractive to him because of its central location and nearness to the training field. While resident here he was repeatedly elected to the legislature and in 1700, though long past middle age, he was appointed to keep a school "for the learning of children to read and write." This school was probably kept in the westerly wing and this old house thus has the distinction of being not only the first parsonage but the first school house.

During the next hundred years the house was successively owned by Deacon John Kimball, Daniel Herrick and Capt. Uzziel Dodge, the second postmaster in town. While Capt. Dodge owned the house, Miss Elizabeth Shaw, of Beverly, conducted a private school in the westerly room and, on the Sabbath, a Sunday school, the first in town.

Dr. Samuel Dodge, son of Capt. Dodge, was invited to settle in Wenham as physician and surgeon and took up his residence in the old house until his death in 1833.

The house next came into the possession of its last private owners, the Richards family. Mrs. Mary Ann Richards, the widow of Jabez Richards, was a woman of strong determination and generous understanding; it was under her direction that the most extensive repairs and changes were made. The old front door was closed, the old stairs removed and an inside finish put on the walls while the fireplaces were reduced to their final size; the westerly room now became "the ball room" and paint covered the old beams.

When this house was offered for sale in 1921, all descendents of its former owners were scattered far from Wenham and the Wenham Village Improvement Society, desirous of the preservation of this old landmark, acquired the property through the efforts of the Historical Association.

The following list is taken from a pamphlet entitled *The Claflin-Richards House, Wenham, Mass.*, issued by The Historical Association, Wenham Village Improvement Society, Inc., January, 1923.

Owners of the Claflin-Richards House:

Robert Macklafflin	1664–1672
Town of Wenham for minister's house	1672–1683
Rev. Joseph Gerrish	1689
Capt. Thomas Fiske, Jr	1693
Deacon John Kimball	1758
Daniel Herrick	1773
Capt. Uzziel Dodge	1796
Dr. Samuel Dodge	1827
Capt. Edward Kimball rented to Jabez Richards	1836
Mary Ann Richards and descendants	1840–1921
Historical Association of Village Improvement Society, Inc.	1921

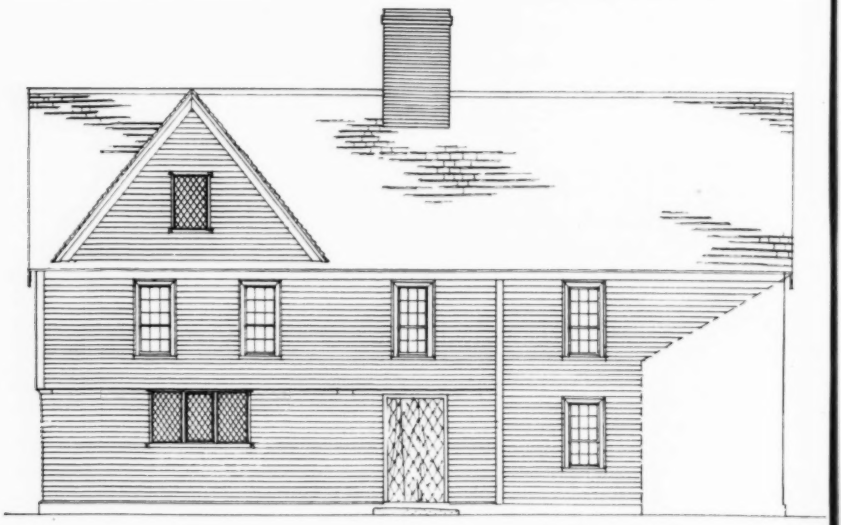
A Description of Robert McClaflin's House

By Wm. Sumner Appleton

THE following comments on the McClaflin house were prepared under a great handicap, since the writer was unable personally to verify some of the statements here made. These have, however, been checked up carefully by others and are believed to be accurate. In orienting the house it is for the purpose of this article assumed to face south, which is not quite accurate, since it faces somewhat west of south.

The house erected in 1663-4 by Robert McClaflin is of two stories, having one room on each floor, with chimney, stairs, entry, garret and cellar. It had a two-story porch which may have contained a porch chamber, and in addition there was an extension of some kind at the rear. On the front, back, and west end, the second story projects beyond the first, with an overhang of about four inches, but whether or not it does so on the east end the writer has been unable to ascertain, but believes it does not. It is a frame house of plank construction, and accordingly has neither filled walls, nor any studs, excepting one on each side of the old window openings. The exterior walls of each story are of vertical planking, of which, in the course of the recent repairs, all on the lower floor was uncovered, and some on the second floor. The planks, which are two inches in thickness, are on the ground floor nailed to the sills, and at their upper ends are ingeniously fitted into a groove on the under side of the second story girt. On the original east end wall the planks are no longer in place on either story, having doubtless been removed when the addition of 1673 was built. The plank walls passed outside of the posts, and the shoulders of the two westerly posts are exposed to the weather, those of the entry bay posts showed in the entry, and those of the northern chimney bay posts may have shown in a room at the rear. The southeast corner post is now gone below the girt and the northeast corner post is either gone or concealed, at all events nothing could be learned about it, but there seems no reason for supposing that these posts differed from those at the other end excepting that they probably did not overhang to the east. The four surviving posts are of course, smaller on the ground floor than on the second, having been hewn out in such a way as to make the overhang, through their extra thickness in the second floor. This form is accordingly known as the hewn overhang to distinguish it from the structural overhang in which the second story frame has separate posts standing on the projecting ends of the girts. The Hall summer runs east and west, that in the chamber north and south, each having a quarter-round chamfer or bead with lamb's tongue stop. The Hall chimney girt has an ogee chamfer and the other girts have a bevel chamfer and all have the lamb's tongue stop. The floor joists have no chamfer.

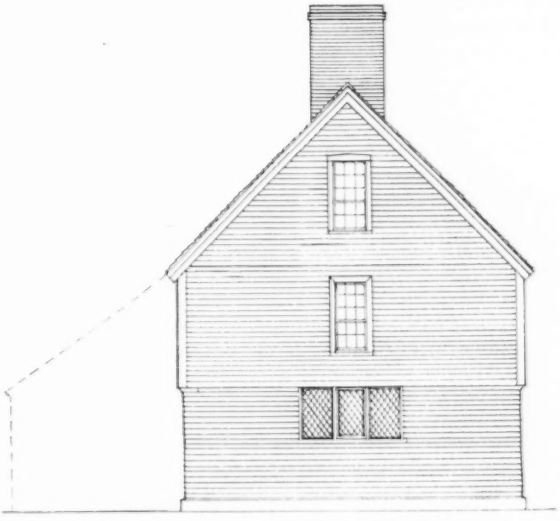
When the Historical Association of the Wenham Improvement Society came into possession of the McClaflin house this showed no features of partic-



SOUTH ELEVATION

ular interest, even the hewn overhang being wholly concealed and forgotten as the result of furring out the exterior first floor walls. As the owning society had at the outset no intention of making a restoration of any kind, a building committee was appointed simply to repair the house as a headquarters, but the plans were later changed as more and more 17th century evidence of unusual interest was uncovered. As a first step it was decided to guard against the fire hazard by making sure the chimney was sound. Various slight defects were apparent, and it was evident that the chimney had at various dates been much altered. At first it was proposed to repair the weak spots, and at the same time to open bricked up fireplaces and remove later ones, but the mason reported that the bricks were too far gone and too soft to permit this and that the chimney had been altered and cut up beyond any possibility of saving. The chimney was accordingly removed and a new one built which is frankly an adaptation of old styles to modern needs. In demolishing the chimney there were uncovered two entire brick ovens and half of another. With the exception of the south wall almost none of the chimney was found to be original excepting perhaps some of the lowest courses of bricks. Among these last was found the outline of the base of an oven having its entrance from the north.

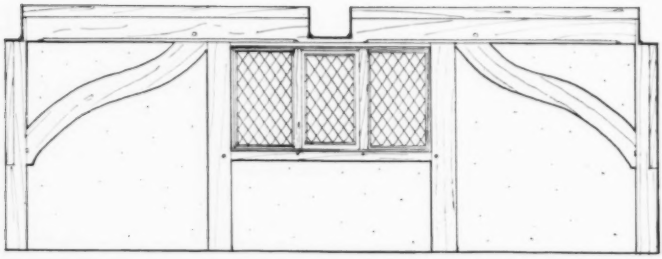
About a hundred years ago, during the Richards ownership, the old stairs south of the chimney were removed, and on each floor a room was substituted in the space formerly occupied by them and the entry. A new staircase was then built on the north side of the house, the entry of which encroached considerably on the original



WEST ELEVATION

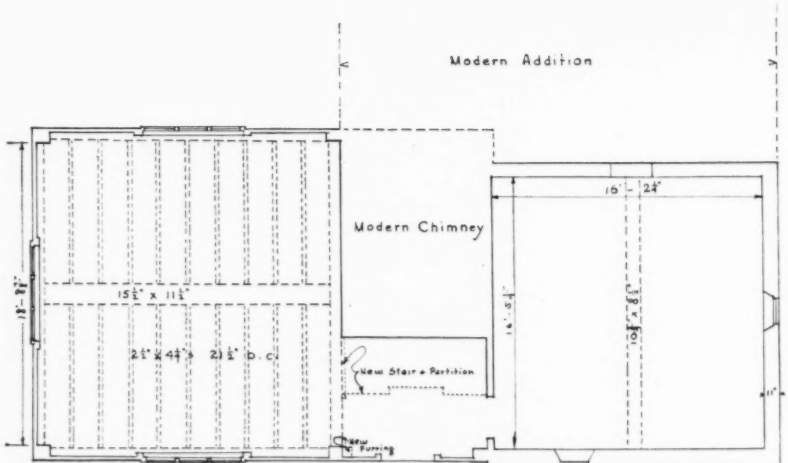
fireplace space of the Hall, or west parlor. The building committee has now put back into the original staircase space a new staircase of olden type and the old entries have been restored, to the great improvement of the house. The northern entry though not left as found, still encroaches on the original Hall fireplace area.

It was a pleasant surprise to discover that the house had formerly a front porch two full stories in height. The evidence for this is twofold. In the first place, there are in the chimney post and corner post the mortise holes for the porch girts and in the plate those for the porch plates; there are no sill mortise holes because at this point the original sill had gone. In the second place there is the evidence, unique so far as the writer knows, afforded by a groove in a second story plank near the west mortise holes, showing where the clapboards with which the porch planks were covered, were fitted into the planking of the main house so as to give a snug joint. The loss long since of the corresponding first floor plank deprives us of the additional evidence its presence would have given. The projection of this porch is uncertain for the stones on which its corners doubtless rested, have gone to the spot to which generations of careful gardeners would naturally have consigned them. The suggestion that we have here evidence only of a second story bay window seems unsound for there are no mortise holes for supporting braces, and in their absence posts would have been required under the outer corners. Evidence of either form of construction has yet to be found in any old house still standing in New England, whereas we have some two-story porches. This



Note: Walls are 2" plank plastered. Studs + Frames new.

End Elevation, West Room

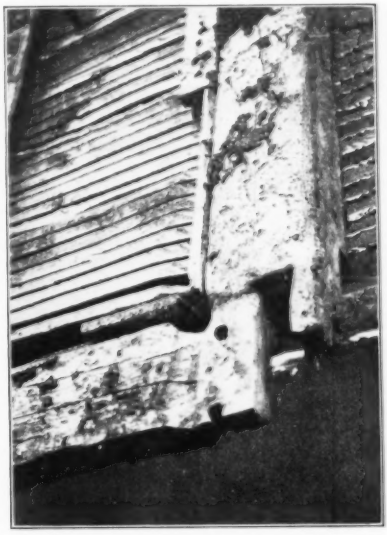


Note: All casements are wholly new.

First Floor Plan

South Chimney Girt Post

SHOWING MORTISE FOR TENON OF THE WEST GIRT OF THE PORCH. THE GROOVE TO RECEIVE THE PORCH CLAPBOARDS IS PLAINLY SEEN IN THE ADJOINING PLANK



Upper Part of Southeast Corner Post

SHOWING MORTISE FOR TENON OF THE EAST GIRT OF THE PORCH

porch site was the only point on the south front at which the clapboarding was removed for the full height of two stories, but the condition of the Historical Association's finances was such that no new porch could be built, and the opening was closed and reclapboarded. Although a reconstructed porch would be absolutely new throughout, it is essential that it should be built if the house is to have its old-time appearance.

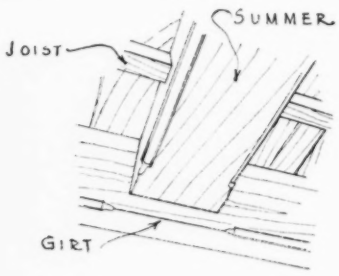
To the great satisfaction of those in charge of the work of repair and restoration the exact evidence as to the size and location of an old window opening was found in the planking at the western end of the house. There the old planks under the window were horizontal, and nailed to two studs, whereas elsewhere they were vertical. There were originally three of these planks, of which the upper was missing. Their ends fortunately had been made a little longer than the width of the window opening, and so a little notch in the vertical planks forming the jambs of the opening established the exact height. Further evidence was a mortise or perhaps a gain, the writer has been unable to ascertain which, in each stud, to take a cross piece now unluckily gone, beneath each window. The dimensions of this hole in the wall are just right for a triple casement window. When altered for a modern window the change consisted simply in narrowing and deepening the opening, as can be readily seen in the accompanying picture. This was exactly the

Opening in South Wall

SHOWING ENTRY AND FORMER LOCATION OF STAIRS. THE MORTISES IN THE POSTS AT THE LEVEL OF THE GIRTS SHOW WHERE THE PORCH GIRTS WERE TENONED TO THE HOUSE

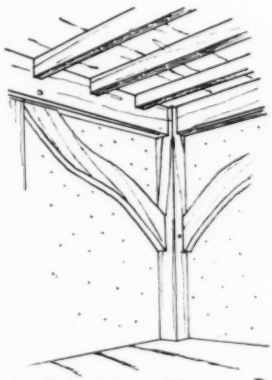
evidence uncovered at the Browne house in Watertown, as well as in a number of others where the record had survived. On the south first floor front the only window evidence consisted of the mortise holes in the girt to take the window studs, and some mutilated bits of studs, all indicating a window just like that at the west end. The second story original window evidence was easily consulted by looking up under the second floor clapboarding at the west end of the house. There was to be seen between the ends of the vertical planking the lower edge of a horizontal plank two-thirds the length of those on the first floor and so indicating double casements for the Hall chamber.

Other supremely interesting bits of old work uncovered on opening up the west wall were the curved braces from



INTERSECTION OF SUMMER AND CHIMNEY GIRT, WEST ROOM

the corner posts to the second story girt. The western brace in the south wall was also found intact but of the eastern brace and of those in the north wall only the mortise holes were found in posts and girts. Nothing like these beautifully ogee curved braces is known elsewhere in New England and they give to the house a decided touch of English cottage construction. It was after uncovering the curved braces and the window evidence that the committee in charge of the work decided to go much further than originally planned and to restore at least the McClaflin lower room or Hall to its original 17th century appearance, while leaving the chamber as of the 19th century. Not only had the lower floor been furred on the outside, thus totally concealing the hewn overhang, but it had also been furred over on the inside, concealing the braces and girts, and making possible deep window embrasures. Precisely similar inside furring had altered the old Whipple house on the county road in Hamilton, about two miles away, as was found when restoring that house. This was one of the common modes of transforming an old house of mediæval appearance into whatever might happen to be the later



S. W. CORNER WEST ROOM

Southerly Brace at West End of House
SEEN FROM THE OUTSIDE AFTER REMOVAL OF PLANKING

style desired. Accordingly the entire early 19th century Hall trim was removed, and the ceiling was taken off in order to uncover the whole of the summer beam and the girts together with their floor joists. The room was found to have been originally lathed and plastered on the inner face of the outer planking and at some time the frame had been whitewashed. The room was repaired and restored as follows: On the exterior walls all surviving old lath and plaster was preserved, and the bare spots were covered with new, while the east or fireplace wall was vertically sheathed. The ceiling boards were whitewashed afresh. The floor joists and frame were given a sombre color like old wood, perhaps a stain, which is unsatisfactory. It would be better to whitewash them, too, or to scrape the frame and perhaps also the floor joists and ceiling boards down to the wood. As for the windows, there was evidence for one to the west and one to the south. For these, adaptations were made of the original oak triple window frame found in the Browne house at Watertown, the middle sash only opening. Errors in detail unluckily crept into the leaded work but these can be corrected easily at some future time. The horizontal planks below the west window were not put back as they should have been, vertical ones being substituted for them. The committee added a third window in the north wall, which seems a pity, since it gives a misleading impression of the appearance of the Hall as built. All four window studs were found in place, in part at least, but mutilated in varying degrees. These were all discarded and new ones inserted in their places. It would have been wiser had the best, at least, been either repaired and used, or simply stored in the garret, it being a fundamental rule in restoration work that original evidence should not be destroyed. As for the braces, as stated before, three were found in place, two in the west wall and the westerly one of the south wall. The three missing braces were replaced by new ones of good shape, but machine made.

Post at Southwest Corner
AT THE LEVEL OF THE GIRTS, SEEN FROM THE SOUTH

Whether or not the mortise holes for a northeast Hall brace ever had been filled might perhaps have been determined by an examination of the mortises and the pin holes. However, this was not done and now the mortises are hidden by the new brace which is nailed over them, while the pin holes are plugged up. The evidence against a brace and in favor of a door here seems to the writer to be conclusive. In the first place, there is midway in the north girt a dovetailed twelve inch gain to take the west girt of a leanto, or girt or plate of an ell. In the second place from this gain easterly to the corner the groove under the girt is one inch wide to take the boards of an interior partition wall, instead of two inches wide as to the west of the gain to take heavy outside planking. In the third place there are in the girt, between the large gain and the corner, two narrow mortise holes four inches long to take door posts, and one similar hole remains in the only piece of original sill to survive in place under the easterly of these mortise holes. In the fourth place the fact that the sill was found cut down about four inches here proves that it was done either to allow a door to swing by, or to obviate the need of stepping over the sill. It is doubtful if this last would have been allowed to count at the time the house was built and so this cut probably dates from another generation. It is, however, cumulative evidence for a door at this point instead of a brace, although in this case the evidence is not necessarily original evidence. Finally, there is the evidence of a very early oven opening to the north found towards the bottom of the chimney suggesting a room to be reached only by a door in the place of the brace. Whether this door led into a leanto, or an ell of a story, a story and a half, or of two stories is not clear. Evidence against a leanto is the fact that the rear plate, in none too good condition, shows no trace of ever having borne leanto rafters. What evidence the back wall of the house, and the back of this girt may have to show can only be ascertained when these are completely uncovered.

The building committee found all the old sills in place, with the exception of a short length at the site of the porch. More unusual still, the west end posts were found to be still tenoned into the sill mortise holes. These sills were all chamfered along the upper inner edge, good evidence that they formerly projected into the Hall. Additional evidence was that, as stated above, the back sill was cut down at the ell or leanto doorway, either to let the door swing by or to obviate the necessity of stepping over it. It was found that only one-third or so of the rear sill could be saved, and none of the others, and they were replaced with new, not necessarily like the old. The cellar floor joists and

Planking at West End of McClaflin House

SHOWING THE END AFTER THE REMOVAL OF THE CLAPBOARDS

summer which were not original were condemned as unsound and the committee put in their place a new floor of modern construction without a summer and laid flush with the tops of the sills, unlike the original. To the writer's mind this was an error in judgment, but it can be readily remedied in the future, being simply a question of price.

In certain cuts in the southerly roof boards there was seen positive evidence of a gable having originally existed here, and further proof was uncovered in disused mortise holes in the front plate. The committee restored this gable according to modern methods of construction and detail.

In the 1673 extension, added to McClaflin's house, as stated in Mrs. Cole's article, in order better to accommodate the Reverend Joseph Gerrish, the most distinguished feature is the later added chamber paneling, dating from the 18th century.

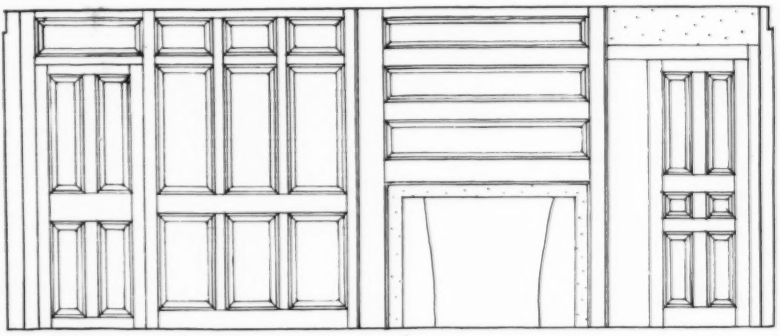
The old McClaflin house is structurally a very interesting survival of a style of building which is truly mediæval in character. The ogee curved braces alone, the only example of the kind so far found in New England, would of themselves be enough to give this house supreme interest. They serve also to show how a feature, of which there must be hundreds of examples surviving in England, may be so scarce with us as to narrow down to but this one known instance.

That the house is of plank construction with hewn overhang, rather than

of stud frame with brick or clay or other filling, is another unusual feature. A few years ago plank houses were practically unknown in Essex County but now we know that the old Hutton-Goldthwaite-Allen-Pickering house, about half a mile away in Wenham, is of like construction, as was the Stanwood house which stood to the eastward, in West Gloucester, but burned down some years since, and also, the Freeman house, still standing at West Gloucester, near the railroad station. The Burnham-Russell house at the easterly end of Chebacco Pond in the town of Essex, is the most recent addition to the list.

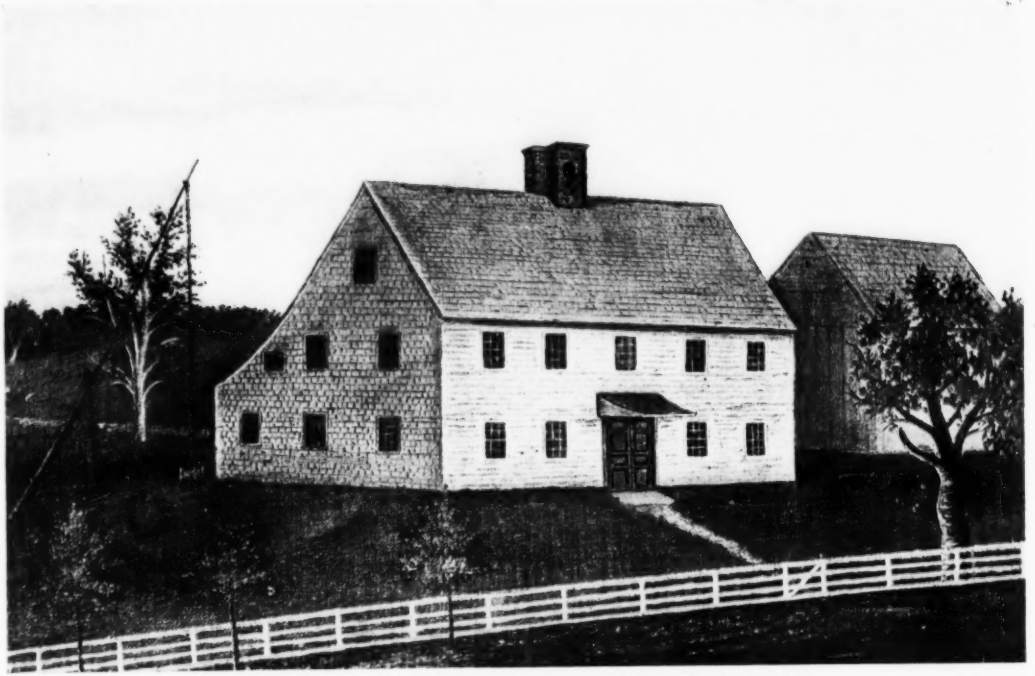
Finally the discovery of the absolute size and location of the first and second floor window openings, and of the evidence for a porch, and the evidence for a leanto or ell, taken in connection with the other noteworthy features of the house, give a total of such absorbing interest as is seldom found in any one 17th century New England house. The Historical and Improvement Societies are fortunate to have secured for preservation so appealing a building, and it is to be hoped that its repair and restoration may be financed to completion, but henceforth with that close attention to details essential if work of this kind is to have value in the opinion of our successors.

The building committee and the carpenter, Mr. Herbert W. Porter, had no previous experience in repairs involving the preservation and restoration of 17th and 18th century work. In acquiring the house the Wenham Improvement Society was simply looking for a home, and by merely repairing the house could have had one both suitable and prepossessing, and at very reasonable cost. It is much to the credit of the building committee, and the Historical Association of the Improvement Society that they were willing, gradually, to alter their plans, to enlarge their scheme, as more and more original evidence of interest was uncovered, and so to face the need of raising and spending much more money than at first proposed. Generous support, especially from Mr. and Mrs. John Claflin of Brooklyn, N. Y., gave the committee courage to do this, to which they were furthermore urged by the advice of some officers and members of the Society for the Preservation of New England Antiquities. It is by no means surprising that in the course of this work some mistakes were made, and particularly lucky that most of these were of a nature the results of which further expenditure can repair. The occasional failure to follow evidence was to be expected under the circumstances, but is none the less regrettable. The failure to preserve original evidence from loss or distinction is unluckily all but universal in such work, and is one reason why repairs and restorations, whether by individuals, architects, or societies, can so seldom be referred back to as authoritative. It is to Mr. Norman M. Isham that the writer is indebted for the first words of warning on this all important subject, which cannot be too often repeated to all having charge of repair and restoration work on our old houses. *The evidence on which restoration is based should not be destroyed in the course of the work, but should be carefully preserved as a voucher for the accuracy of this work.* If possible, and it generally is possible, the actual stick or brick or what not should be preserved



18th Century Paneling, East Chamber

intact, or at least the vital portion of a large stick. The least that may be asked is that a copious series of photographs, measured drawings, and written notes should be prepared as a permanent record. As a general rule practically nothing of the kind is done. For instance, it is quite unlikely that the evidence for the McClaflin house would have been put into writing had this article not been prepared. The committee having the McClaflin house in charge had at its head Mrs. Cole, the author of the article on this house which immediately precedes the writer's. To her leadership is due the fact that this restoration has so much of merit. With still more care the remaining work can be made still more successful. The advice of the officers of our Society for the Preservation of New England Antiquities is available for the asking and both the Wenham Village Improvement Society and its Historical Association have our best wishes for success.



The Parson Russell House, Branford, Conn., Built in 1687

THE CRADLE OF YALE COLLEGE

How the Doors of the Rev. Mr. Russell's House in Branford in which the Founders of Yale Assembled 1701-2 Came into the Possession of the University

By George Dudley Seymour

"We are in no danger of falling into too great a reverence for the things of antiquity."
— *Anonymous.*

ONE red-letter day, early in 1897, I received in my office a lady who came, she said, to consult me, not as a lawyer but as an antiquary. What happy fortune directed her to my office I do not recall, if I ever knew, but she was doubly welcome because so charming to look at and to listen to. I wish I had the skill to draw her portrait; a small, delicate woman, with clear-cut features and gentle but formal manners, dressed in careful handsome black and wearing a becoming black bonnet framing her sweet face in ribbons and falls of fine lace. She had the "mark of race" — a New England Holbein. Her errand was soon stated. She had come to offer me the very doors that gave passage to the ministers who gathered in the study of her ancestor, the Rev. Mr. Samuel Russell of Branford, on the occasion of the historic meeting when, according to tradition, each dominie laid an offering of books on their host's study table, saying, "I give these books for the founding of a college in this Colony."*

It is needless to say how quick I was to see the value of these relics to Yale, as souvenirs of the first building directly associated with the founding of the College. The precious old doors were offered to me without restrictions, to be disposed of in my discretion, but, as I remember the circumstances, I outlined a scheme, before the donor left the office, of giving the doors to the College, to be featured in the great Yale Bicentennial Celebration, for which plans were already being formu-

*Ten of the principal Ministers in the Colony, were nominated and agreed upon by a general Consent both of the Ministers and People, to stand as Trustees or Undertakers to found, erect and govern a College, viz.

The Rev. Messrs.
James Noyes of Stonington
Israel Chauncy of Stratford
Thomas Buckingham of Saybrook
Abraham Pierson of Killingworth
Samuel Mather of Windsor
Samuel Andrew of Milford
Timothy Woodbridge of Hartford
James Pierpont of New Haven
Noadiah Russel of Middletown
Joseph Webb of Fairfield

The ministers so nominated, met at New-Haven and formed themselves into a Body or Society, to consist of eleven Ministers, including a Rector, and agreed to Found a College in the Colony of Connecticut; which they did at their next Meeting at Branford, in the following Manner, viz: Each Member brought a Number of Books and presented them to the Body; and laying them on the Table, said these Words, or to this Effect; "I give these Books for the founding of a College in this Colony." Then the Trustees as a Body took Possession of them; and appointed the Rev. Mr. Russel of Branford to be the Keeper of the Library, which then consisted of about 40 Volumes in Folio. Soon after they received sundry other Donations both of Books and Money, which laid a good Foundation. This Library with the Additions, was kept at Branford, in a Room set apart for that Purpose near three Years, and then it was carried to Killingworth. *From:* "The Annals or History of Yale-College," in New Haven, in the Colony of Connecticut, from the first founding thereof, in the Year 1700 to the year 1766; with an appendix. By Thomas Clap, A.M., President of the said College. New Haven, 1766. Pages 3 and 4.

lated. I explained my own ideas to Mrs. Mann and they met with her heartiest approval. I had in mind mounting upon their panels engraved brass or silver plates, bearing suitable inscriptions and also showing the old house and its ground plan, and hanging them in a staunch light oak frame with handles, adapting them to be carried in the Bicentennial Procession in the manner of European pageants. But other counsels prevailed and after some preliminary consultation with the authorities, they were presented as I received them to the University, accompanied by the following letter:

New Haven, Conn., June 18, 1901.

THE PRESIDENT AND FELLOWS OF YALE UNIVERSITY,
New Haven, Connecticut

Dear Sirs: I have the honor to offer you, on behalf of Mrs. Mary Ellen (Russell) Mann, of Branford, the original doors of the historic parsonage of her ancestor, the Rev. Mr. Samuel Russell, one of the Founders of Yale College. These doors hung in the main or front entrance of the house, and gave passage to the ministers who met in Mr. Russell's study, in the year 1700 or 1701, to discuss plans for the foundation of a college. According to the account of President Clap, they placed donations of books upon the study table, with the words, "I give these books for the founding of a College in this Colony," or words to that effect.

The original house was torn down in 1835, but the doors were preserved in the garret of the new house built on the site of the old house, and they have been carefully treasured since that time by descendants of Mr. Russell, and for the last ten years or so by Mrs. Mann, who now owns and lives upon the homestead. With the doors are the original post-hooks on which they were hung, a photograph from a painting of the original house, and a ground plan of the house showing the location of Mr. Russell's study, this plan having been made by Mrs. Mann's uncle at or about the time the original structure was demolished.

I have myself made no examination of the records, either ecclesiastical or civil of the town of Branford, but my understanding of the matter is that the old house was built at least as early as 1667, by Mr. Richard Harrison, and that Mr. Russell first occupied the house about 1687. It was finally deeded to him by the town or church society January 2, 1692. These facts can, perhaps, be ascertained more definitely by recourse to the Branford records.

The doors themselves afford intrinsic evidence of great age, and the tradition connected with them is so positive in its assertion that they hung in the house at the time the historic meeting of ministers took place, that I cannot doubt the fact.

Very respectfully,
signed: GEORGE DUDLEY SEYMOUR.

The historic doors are at present utilized as cupboard doors in the private office of the University Librarian, Mr. Keogh, who, very properly, regards them as documents of prime interest in the beginning of Yale's history. He proposes that they shall be installed in one of the public rooms of the new Sterling Memorial Library, so as to open into a sort of reliquary containing association books connected with the early history of Yale, such as books presented by Elihu Yale, Joseph Addison, Sir Isaac Newton, Sir William Blackstone, Bishop Berkeley, and others whose names figure in the earliest chapters of the history of the College. Running back over two eventful centuries, these doors are believed to be the oldest surviving memorials of any building directly connected with the long tradition of Yale College. It is fitting that they should be preserved in the University Library, since their prime interest lies in their connection with the handful of books to which they gave passage in 1701 and which formed the nucleus of Yale's library today, — in certain fields of literature one of the largest as well as one of the richest in the world.

The doors in their present condition are 6′ 0¼″ high, the right-hand leaf being 21½″ wide and the left-hand

Doors from the Parson Russell House

AS INSTALLED IN YALE UNIVERSITY LIBRARY

leaf 22¼″ wide. It must be added, for the sake of accuracy, that it is definitely known that within very recent years, the doors have been reduced in height by cutting them off top and bottom, but just how much cannot be definitely ascertained. It may be safely assumed that originally they were not less than 6′ 4″ in height. Evidence is not wanting to indicate that the respective leaves were wider than at present. The common practice of the period to which the doors belong was to make the leaves about 2′ wide.

The doors are of white pine, the stiles and rails mortised and tenoned and pegged. Their surfaces, particularly their exterior surfaces, are deeply seamed and weathered, as would be expected from their great age, reaching back, as they do, almost to the middle of the 17th century. In color they are of a brownish-gray, but faint traces of red paint still remain upon their inner surfaces and bluish-white upon their outer surfaces. The latch plate appears to be original. The strap hinges appear to have been removed, bent and reset at the time of the present installation of the doors.

Mr. J. Frederick Kelly, who made the measured drawings here shown, assures me that a critical examination of the doors discovers nothing which, in his opinion, runs counter to the belief that they were made, at the time it was built, for the house from which they were salvaged in 1835. Mr. Kelly's opinion on this subject is all but conclusive, since no one has ever so deeply studied the carpentry of the 17th century houses remaining in Connecticut.

The house is believed to have been built prior to 1667 by Richard Harrison. At a town meeting held October 9, 1667, a committee was appointed to buy Richard Harrison's house and lands for a minister. But having difficulty in settling a minister, the Town concluded, in 1682, to let the house and lands "at an outcry by a piece of candle." A short piece of candle was lighted at the time of the sale and the auctioneer cried up the property until the candle burned out. He that bid highest during that time obtained what was offered. In 1686 the Rev. Samuel Russell (Harvard, 1681) was settled over the people, "To be a blessing unsurpassed, Till life itself be ended."

With his college classmate, the Rev. James Pierpont, he was one of the prime movers in the founding of Yale College in 1701, and took part in the erection of the first college building in 1717–1718. Mr. Russell died 25 June 1731; his "virtuous consort," Abigail, a daughter of the Rev. John Whiting of Hartford, died 7 May 1733.

> "In slumber bound fast by his side,
> The tender part, his pious bride,
> Reclines her head.
> So round the oak the ivy twines,
> With faithful bands in spiral lines,
> Though both are dead."
>
> (*Inscription*).

How many times this godly pair of "lost years" must have passed and repassed the venerable doors which have now found sanctuary within the walls of the College which he helped to found!

The Ancient Monuments Society

THERE has recently been formed in the north of England and Wales a new Society, the name of which heads this article.

This greatly needed Society is already hard at work, having in a very brief space of time managed to protect Samlesbury Old Hall which was threatened with demolition. We present here for the benefit of our members, the greater part of an article by John Swarbrick, Reporting Architect to the Ancient Monuments Society. This appears on pages 615–616 of the *Journal of the Royal Institute of British Architects* for 19 September 1925, and is here reprinted with Mr. Swarbrick's consent.

"The Ancient Monuments Society was founded by a number of architects and other admirers of our ancient buildings, who had for some years been endeavoring in the northern counties of England and in North Wales, with great public spirit, to do what they could to arouse public interest in a number of fine old homes and to preserve them from needless destruction.

"They had discovered, incidentally, that existing legislation and sympathetic organisations, although admirable to a point, had great limitations, and that, in the northern counties, a new and active organisation was needed in order that every resource might be tried and no opportunity lost when old buildings of architectural interest might be in danger of demolition.

"The objects of the founders were clearly stated in a list that was widely circulated at the time when the Society was formed. A few typical quotations from this list may be of interest:

"To promote the study of and arouse interest in ancient monuments, historic buildings, our British national architecture generally, works of art and ancient craftsmanship, by means of lectures, publication, exhibitions and in other ways.

"To collect drawings, photographs and other records relating to ancient monuments, historic buildings and craftsmanship.

"To encourage the preservation of ancient monuments, works of art, craftsmanship and natural scenery, and also of old gardens, statuary, avenues, lakes and settings generally which enhance the interest of the buildings or other objects.

"To advocate and assist in the promotion of legislation for the more adequate protection of all ancient monuments, historic buildings, and ancient craftsmanship worthy of preservation, whether capable of protection by the Ancient Monuments Boards or otherwise.

"To advocate the extension of the work of the Royal Commission on Ancient Monuments and historic buildings.

"To secure for exhibition purposes accurate scale models of artistic quality to illustrate ancient buildings.

"To assist or co-operate with archaeological and art societies and other kindred organisations in order to secure the protection of ancient monuments, works of art and craftsmanship worthy of preservation, and to obtain unity of action in all matters of common interest.

"To advise and assist in the formation of public museums and other col-

lections to illustrate ancient structural and decorative work and craftsmanship.

"To organise and undertake urgent works of reparation to ancient monuments to prevent their collapse or decay. . . . The list of important ancient buildings unnecessarily destroyed in the northern counties during the last fifty years would be appalling. Even quite recently numbers of interesting houses have been lost. At the present time, the central portion of Lathom House, near Ormskirk, the last surviving work of Leoni in Lancashire, and, in fact, the last great eighteenth century house in the county, laid out with flanking pavilions and curved corridors, is being demolished. Not unnaturally, Professor Reilly regrets the loss of such a building, belonging, as he states, to the most cultured period of English architecture.

"Bold Hall, also by Leoni, has already gone. Samlesbury Hall, near Blackburn, was recently sold to a builder for breaking-up purposes, like Standish Hall which has just perished. Danes House, Burnley and Worsthorne Hall, admired by W. G. Manerton, have been demolished. Marton Hall and many other old homes have disappeared. Gwydir Castle, near Llanrst, is now a roofless ruin, the relic of two destructive fires. Agecroft Hall is in danger, Radcliffe Tower on the point of falling to pieces owing to the need of repair, and Hurleston Hall, near Ormskirk is in course of demolition. Lydiate Hall is dilapidated, whilst Denton Hall has nearly gone and Harden Hall is in the last stages of decay. Dutton Hall, near Runcorn, has been converted into cottages, and many fine old homes like Chorley Hall, Cheshire, are being used as farmhouses. In many cases application to inferior uses has been the main cause of their survival. These are but typical cases, yet they indicate what is happening at the present time throughout the length and breadth of the country.

"The new Society has already been particularly active in many ways. In addition to advising owners and appointing delegates to serve on various committees, it has also been instrumental in forming special local committees for the preservation or exploration of ancient buildings. In this way it has come to be associated with the movements for the preservation of Hough End Hall, Manchester; the exploration of Cockersand Abbey; the preservation of Samlesbury Hall near Blackburn, and others. At the present time its advice is being sought regarding many structures scattered over the northern counties and in North Wales, many of which are of considerable architectural interest. The intervention of the Society in the case of Samlesbury Hall was providential, as a sum has now been subscribed which has made it possible for the building to be purchased for the purpose of preservation from the builders, who had bought it with a view to demolition, and had also acquired the entire site on which it stands. Those who would like to obtain further particulars or to become members of the Society should communicate with one of the hon. secretaries; Mr. W. S. Booth, the Grammar School, Blackburn, and Miss M. Deanesly, M.A., the University, Manchester."

Ancient Carpenters' Tools, Part V

By Henry C. Mercer, D.Sc.

Tools for Surfacing, Chopping and Paring (Continued)

THIS disposes of the so-called "bench planes" of the carpenter and joiner, as strictly defined by the name, which are only referred to when we speak of levelling wooden surfaces. But their horizontal work is flat and we are not done with the subject until we consider the rarer, free-working instruments which smooth down convex and concave surfaces in the same way. One of these, Holtzapffel, in 1846, in *Turning and Mechanical Manipulations*, Vol. 2, p. 475, speaks of as the

Compass Plane (right) (Fig. 108)

In this rare tool, here shown to the right of the picture, not mentioned by Moxon or Diderot, but used sometimes (according to Rees, *c.* 1800) by the old carpenter-joiner for the free smoothing of concave furniture surfaces or wall curves, the sole is convexed, not in cross-section like the round plane (Fig. 123), but longitudinally, like the rocker of a child's cradle. The blade is convex-edged and protrudes from an extra wide mouth, and the shavings, as with the jack plane, are discharged upwards through the middle of the stock. But as the construction of such a plane, and not its size, should classify it, we may, despite the difference of name, regard the little, so-called

Modelling Plane (left) (Fig. 108)

imperfectly described by Knight, who says nothing of its curved sole (here shown), as only a miniature variety of the compass plane. In this slightly flatter-soled, little home-made specimen, decorated with corner groovings, dotted scallops, two floral scrolls, and the date 1771, the blade is missing. The instrument also once had a "horn," as proved by an empty mortise hole in the fore stock.

By way of comparison with these bench and levelling tools, so typical, in their common types, of the carpenter's plane in general, let us here pause to glance at other forms of similar planes, used in other trades or by carpenters in other parts of the world, or as rare and highly prized relics, excavated by archæologists. Two of these now rapidly becoming obsolete, owing to the transformation of cooperage by modern machinery, are shown in the next illustration as among the typical instruments used in the ancient porcess of making barrels by hand, namely

The Howel and the Sun Plane (Fig. 109)

At first sight, the extraordinary howel (lower specimen), with its convexed blade, appears to be nothing more than the compass plane (Fig. 108) bolted against a flat, semi-circular fence; and so it is, except that its sole is convex, not only longitudinally, but also in cross-section. If placed horizontally and pushed around inside the top of a barrel previously levelled with the sun plane, it will smooth, across the grain, the inner circumference at about one to one-and-a-half inches below the rim, where the

Fig. 108.—The Compass Plane and the Modelling Plane

The rare compass plane, here shown to the right of the picture was used sometimes by the old carpenter-joiner for the free smoothing of concave furniture surfaces, or wall curves. Its sole is convexed, not in cross-section, like the round plane (Fig. 123), but longitudinally, like the rocker of a child's cradle. The little so-called "modelling plane" (left) in which the blade is missing, imperfectly described by Knight, who says nothing of its curved sole, here shown, may be regarded as only a miniature variety of the compass plane.

Neither Moxon nor Diderot, nor the *Circle of Mechanical Arts*, mention the compass plane, but Rees describes it *c.* 1800. Holtzapffel, *Turning and Mechanical Manipulations*, Vol. 2, p. 475, refers to it in 1846, and the *New English Dictionary* quotes W. Halfpenny, *Sound Building*, 1725, and Weale's *Dictionary of Terms*, in 1850, as its only citations of the word "compass plane."

croze (described later) must cut the channel to hold the barrel head. If fenced and pushed at an outward tilt, it will cut the familiar chamfer, called the "chine," between the head and rim top. This chamfer could also be cut with the loose compass plane.

The unique sun plane (upper two specimens), with flat blade and central-shaving discharge, may be said to resemble the carpenter's trying plane, both in construction and purpose, *i.e.*, to level the top rims of freshly staved barrels, except that, to conquer the narrow, circular margin worked upon, which a straight-soled plane would tilt over, the stock is semi-circular while the sole is flat.

Concerning the history of levelling planes and of planes in general, we might well regret the lack of information here presented. Whoever investigates the matter will soon find that writers, earlier than the 18th century, have little to say about planes, and that the variations of the tool, in different parts of the

Fig. 109.—The Howel and the Sun Plane

Because of its similar large semi-circular fence the cooper's howel (lower specimen) looks like the cooper's croze (Fig. 121). But it differs therefrom in blade construction. Closer examination shows that while the sole of the howel is equipped with a broad blade for surface levelling, that of the croze is mounted with a channel cutting tooth.

As described in the text, the howel is a compass plane with sole convexed both longitudinally and in cross-section and equipped with a semi-circular fence, used by coopers to chamfer the inner barrel top above the head with the familiar bevel called the "chine." The sun plane, (upper two specimens) with semi-circular stock and flat sole, levels the top rim of freshly-staved barrels.

world, have been overlooked by travellers.

According to Rich, Pliny (*Hist. Nat. 16, 82*), describes the *Smoothing Plane*, and Tertullian (2d century), *Apologia*, 12; and St. Augustine (4th century), *Civitas Dei*, 4, 8, mention the *Rabbet Plane;* but except the

ROMAN CARPENTER'S PLANE (Figs. 110 A and B)

excavated at Silchester, England, and here illustrated from photographs kindly furnished by the Reading Public Museum and Art Gallery, the only ancient Roman planes known to the writer, appear first, as illustrated

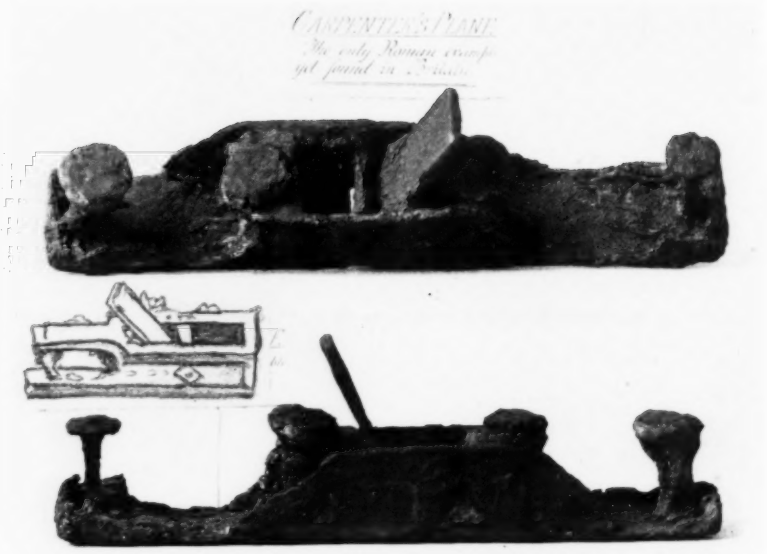


Fig. 110 (A).—Roman Carpenter's Plane

Found in excavating the ruins of the Roman town of Calleva, near Silchester, ten miles southwest of Reading, Hampshire, England, and according to *A Short Guide to the Silchester Collection*, by G. E. Fox and Mill Stephenson, Honorary Curators, is of date earlier than the 4th century, A.D. It was found in 1890 among about sixty objects, mostly of iron "pitched hastily into a well" into a part of the excavations called by the explorers "Insula 1."

The much rusted stock 13½ inches long, here shown on its top and right side consists of an open topped box made of iron plates in which two wooden blocks leaving a central opening for the blade, have been fastened by four much rusted vertical iron rivets. The single blade set at a high pitch slides down in the wide mouth, not in side channels as in the modern plane, but under a cross rivet. Its method of sharpening is not described. The wedge, probably necessary for adjustment, is gone. The added sketch shows a similarly constructed Roman plane of bronze, found at Pompeii, and illustrated in lithograph in *Piccoli Bronzi Nel Real Museo Borbonico* by Carlo Ceci, Naples, 1858, Plate 10, Figure 1, very miserably described as "Rabot Avec Sa Doloire." W. M. Flinders Petrie, who hastily describes it and illustrates it with a dissimilar outlined sketch in *Tools and Weapons*, Constable & Co., London, 1917, says that three other similar planes were found at Pompeii.

Carpenters planes with iron stocks and patented adjustments have become common in the United States since about 1890, but the writer has seen no such instrument of the 18th or early 19th centuries, with one unique exception, namely a plane now in the Museum of the Bucks County Historical Society, here shown in Fig. 111, in which two wooden blocks enclosed on their sides and bottom with iron plates—are held in place by horizontal wood screws penetrating the sides—pointless and hence earlier than 1846. The original blade is missing, but the narrow mouth would only permit a shaving of extreme fineness. The writer has been able to learn nothing from books or living carpenters of this modern iron duplicate of the Silchester plane, which was probably imported from England, certainly made before 1846, and perhaps used for very fine cabinetmaker's work, such as planing out scratches on furniture veneering, etc.

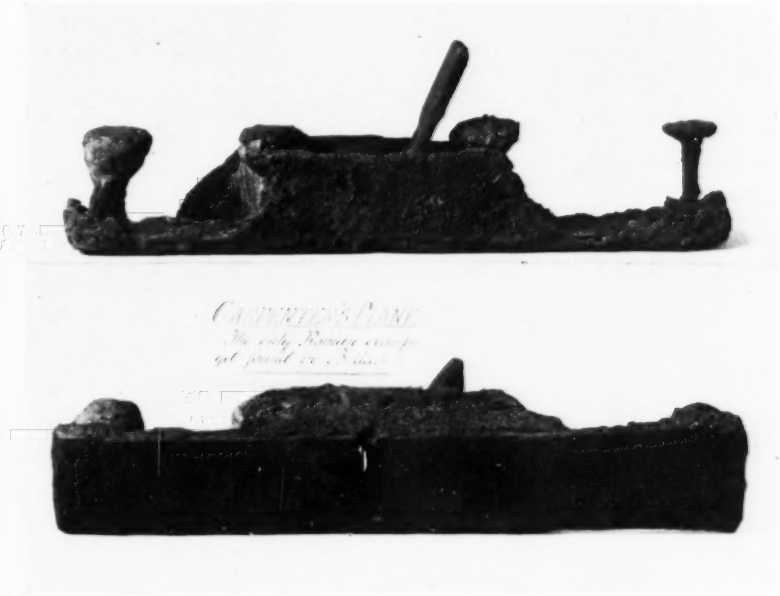


Fig 110 (B).—Roman Carpenter's Plane

The photo-engraving shows the sole and left side of the Silchester plane, Fig. 110 (A.)

by a sepulchral stone carving found at Rastadt, Germany, and shown in Rich's *Companion to the Latin Lexicon*, and second, as a bronze plane, lithographed in *Piccoli Bronzi del Real Museo Borbonico*, Carlo Ceci, Napoli, 1858, plate X, Figure 1.

This latter relic, two thousand years old, is again apparently represented in an outline drawing by W. M. Flinders-Petrie, in *Tools and Weapons*, London, 1917, who says that four planes resembling his dissimilar drawing, found at Pompeii, consist of wooden "bodies" (stocks) iron plated on the bottom (sole), and on the front, back and top, but not on the sides; that the wooden "body," or stock, is perforated with a "back hole," for a handle; and that the "top opening" (shaving discharge) is cut through the top iron plate, and that "a cross bolt [as in the Silchester specimen], runs through the wooden body serving to block the wedge which holds the cutter in place." He also speaks, without illustrating it, of a plane found at Cologne "which has only an iron body without wood block."

He adds "there is also a broken one from the Saalburg (*Archaeologia*, 1894, p. 139)" and finally illustrates a Roman "plane iron for shooting mouldings," found at Newstead, England.

That the soles of Anglo-American carpenters' or coopers' planes of the

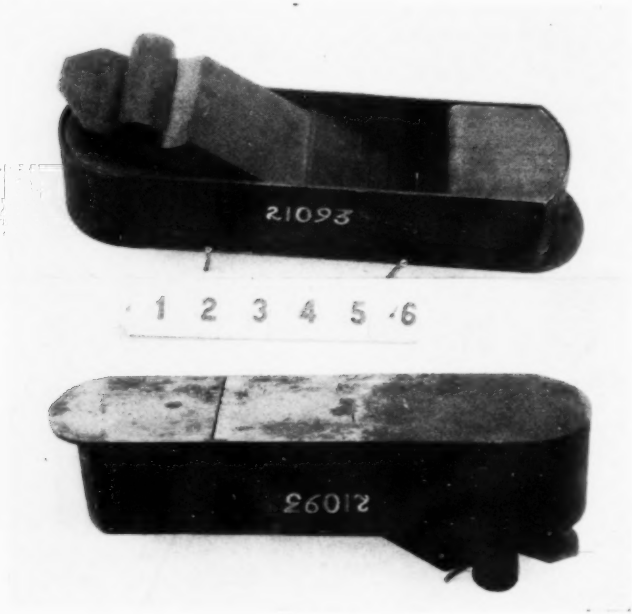


Fig. 111.—Iron Plated Joiner's Plane

This bench plane of date about 1800 in construction resembles the Roman plane from Silchester (Fig. 110 A and B). Like the latter its stock consists of two wooden blocks plated on the sides and bottom with iron, and its wedge is held down in the shaving discharge hole, not in side channels, but under an iron cross piece. With its extremely narrow blade opening (mouth), and blade set upside down, it was probably used for very fine joiner's work, such as smoothing veneers, etc. It was found in 1925, with many other tools used in an amateur workshop, *c.* 1820 to 1860, by Charles J. Wister of Germantown, Pennsylvania, and given to the Bucks County Historical Museum by his heirs.

18th and early 19th centuries were sometimes plated with iron or other metal, is shown by several specimens of plow and tongue planes and of coopers' sun planes and howels (Fig. 109) in the Bucks County Museum, also by a fork staff plane of the type shown in Figure 122, shod with brass, and in the cooper's short jointer or pull plane (Fig. 114) shod with iron. But by way of much closer comparison with the Silchester plane, we here show the very remarkable

Iron Plated Joiner's Plane (Fig. 111)

found October, 1925, among the tools long preserved in the amateur workshop (*c.* 1820 to 1860) of Charles J. Wister of Germantown, Pennsylvania. In this plane, unnoticed by Holtzapffel and Knight, but probably made in England about 1800, two wooden blocks, entirely plated with iron on the sole and sides, but not on the top, form the stock. The top-opening between these blocks forms the shav-

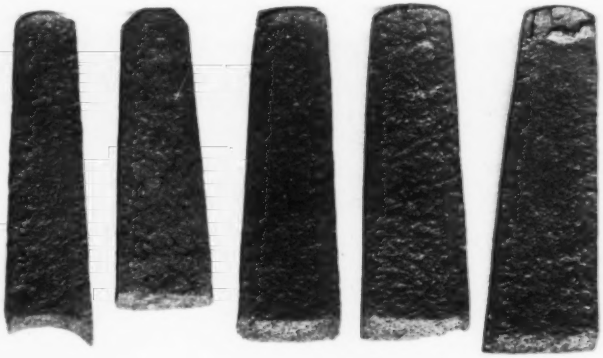


Fig. 112.—Ancient Dutch Plane Irons

These are relics of the ancient Dutch Nova Zembla Expedition of 1596, *cf.* Fig. 106. The rusty irons (blades) are all basilled on the bottom only, to cut downward. The first to the left, with curved edge, belonged to a moulding plane; the second and third with slightly convexed blades, to jack planes. The rest were probably used in trying planes. None are slotted or mounted with bolts for adjustment upon the "double iron" of modern times. Photographed by the kind permission of the Rijks Museum, Amsterdam.

ing discharge, and the wedge is held down exactly as in the Silchester specimen, except that a flat iron plate takes the place of the round cross bar. The slotted blade (originally single) is a replacement, and on account of the extreme fineness of the mouth, is set upside down (basil upwards). The wedge is not notched.

Of sixteenth century date, the

ANCIENT DUTCH PLANE IRONS (FIG. 112)

here illustrated, are of interest, as showing that the jack plane and the moulding plane were used in Holland in 1596; that the plane irons were basilled then as now; and that the device of doubling them, *i. e.*, bolting two together, face to face to facilitate the upcurl of shavings, does not appear on any of the specimens. As proved by photographs seen by the writer, the Chinese have the plow plane, the spoke shave and the saw-toothed croze; also rabbet and bench planes resembling the

KOREAN PLANES (Fig. 113)

now in use in Korea and recently bought there by a missionary at Kang Kei for the Doylestown Museum. But how long the plane has been in use in Korea and whether the Koreans got it from the Chinese, and finally, whether the Chinese invented it or borrowed it from Europe, in ancient or modern times, the writer has failed to learn.

Mr. Stewart Culin of The Brooklyn Institute Museum, quoting the evidence of relics found by him, and the *Wa-Kan-San-Sai-Dsue*, or *Chinese-Japanese Encyclopedia* of the 18th century, believes that the plane in Japan, which was there preceded by a one-hand draw-knife, called the "yariganna," is probably not older than the 16th or early 17th century.

Of considerable historic interest is the fact, that all the Anglo-American

Fig. 113.—Korean Planes

In construction, the Korean "rabbet" plane (left) exactly resembles the Western instrument, with left-side shaving discharge. The "fence" (not seen) is a solid offset along the right side of the sole. The flat-basilled blade, sharpened only on the bottom, not shouldered, is set at right angles to the stock and not doubled ironed.

The blade of the right, lower plane, is convexed as with Western jack planes. In the other two little planes ti is flat. In the upper specimen the sole has been reduced to a flat, circular protuberance. A little peg, utterly unlike the thin, side-pronged plane-wedge of Europe, flattened on its upper side and driven not over, but under the iron, forces the latter upward against side shoulders in the discharge hole. This peg also wedges down the projecting handles into their open cross-cut sockets in the stock. In the two upper specimens, the handle, otherwise loose in the lower plane, has been extra fastened with little iron nails.

The lower plane has a square mortise (not seen) in the upper fore-end of the stock as if for the insertion of a "horn" (handle) now missing.

and continental European planes thus far considered have been pushed by the workman. But whoever supposes that all planes in all parts of the world are and always have been pushed, is mistaken.

Unfortunately the buyer of the Korean planes here illustrated, neglected to notice whether they were pulled or pushed. But Mr. Culin and Knight's *American Mechanical Dictionary*, tell us that the Japanese workman pulls the instrument towards him, and the next illustration

The Cooper's Short Jointer or Pull Plane (Fig. 114)

shows a plane operated by the European and American cooper in the same comparatively unheard-of reversed fashion. Here, on working the little iron-soled instrument to smooth the

Fig. 114.—Cooper's Short Jointer or Pull Plane

This little iron-soled plane is worked by two men, one holding the handles and pulling it towards him, the other bearing down upon the stock, with his thumbs inserted into the hole of the shaving discharge and pushing it. It is used on very long staves employed in constructing tanks, which staves may be from 14 to 22 feet long and therefore too long to be smoothed upon the cooper's long jointer plane (Fig. 103) which is adapted to barrel staves the longest of which would be about 8 feet in length. The tank stave is held in a vise or clamp for the purpose. Information given the writer November 18, 1925, by Charles Lynch, cooper, of 115 North Water Street, Philadelphia, and repeated by his Jewish workman, Abraham Ackovitz, who learned his trade at Kief, Russia. The picture shows the top and bottom of the same plane.

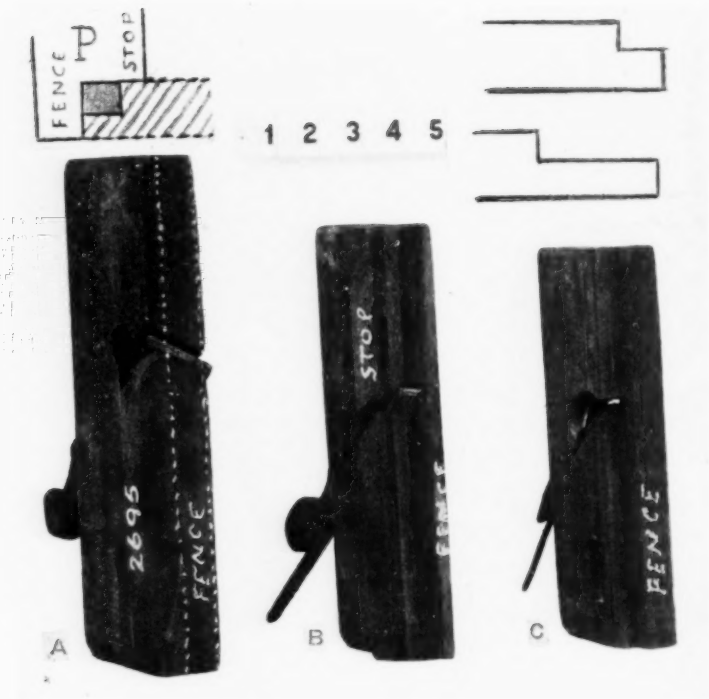


Fig. 115.—The Rabbet Plane

This plane is here shown in its simplest, home-made, early 19th century, narrow form for notching board margins.

In (A), the blade is set, not at right angles to the stock, but slightly askew ("skew rabbet"). The "fence" was a rigid, longitudinal shoulder, now missing, originally nailed along the left side of the sole, within the dotted lines, to regulate the width and accuracy of the cut and its distance from a fixed margin. As this instrument lacks a stop, the depth of the excavation is left to the judgment of the workman. The plane, if pushed with its "fence" pressed against the free edge of a board, will notch the latter longitudinally, either downward on its narrow edge, or, if the board is laid flat, at right angles to its breadth, as in the enlarged outlines shown.

In (B), with a solid side stop, the blade is set at right angles to the stock, and the fence, an overlapping strip, is screwed fast upon the left side of the sole (right side in the picture).

In (C), the fence is a solid offset of the sole. But as this instrument also lacks a stop, the depth of its cut is again left to the workman's judgment.

In (A) and (B), the blade is basilled only to cut on the bottom (bottom rabbet); in (C) to cut on the forward side and bottom. In all three instruments the shavings are discharged where the blades are partly exposed at the side of the stock, and not upward through its middle as in the bench plane, and these discharge holes which penetrate the stock horizontally in (B) (C), open only on its right side in (A).

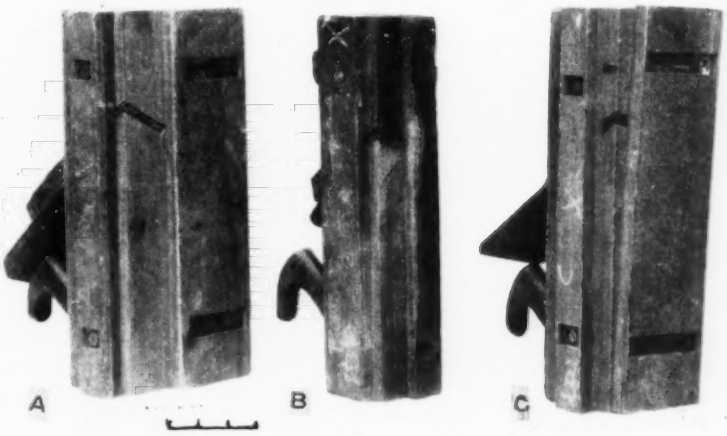


Fig. 116.—The Moving Fillister

This much larger plane, in construction and purpose, exactly resembles the common rabbet (Fig. 115) except that the "fence," instead of being rigid, *i.e.*, nailed fast, or a solid, down-extending shoulder of the sole, is an adjustable strip, sliding on slotted grooves, to increase or diminish the breadth of the cut by its distances from a fixed margin. The stop, also adjustable in (A) and (C), is a similarly slotted strip on the right sole side and in (B) is a down-sliding slotted peg. In (C) a small, cutting tooth, vertically penetrating the stock called the "router," incises the inner corner of the notch, just ahead of the blade, to prevent tearing the wood when the plane is worked, as sometimes, across the grain, *i.e.*, around the corner of a board or door panel. All these and all other rabbet planes have "fences," either fixed or adjustable on the stock, or as loose, makeshift strips nailed on the stuff, since, without a fence, the instrument would wriggle and cut falsely.

edges of tank staves 14 to 22 feet long and too long for the cooper's long jointer (Fig. 103), one workman pulls the plane towards him by its side-projecting peg handles, while another, bearing down upon it with thumbs inserted into its shaving discharge hole, pushes it forward. Whether this pull plane explains the construction and working of the Korean planes (Fig. 115) we are unable to say. But it is not the only pull plane used in the West, since the carpenter's moulding plane (Fig. 125) is pulled in the same way.

But to return to our subject. A few experiments with any of the levelling bench planes will show that they all work freely and in all directions across the wooden surface, while one of the chief characteristics of the next class of planes, namely the

Fitting Planes

above mentioned, is that they do not work freely, *i.e.*, in order to produce the exact rectangular notches, made therewith, they are required to move by means of a so-called "fence," against an established margin. They vary greatly in construction, but their simple purpose, namely to enable one board to overlap and so fit or join upon another, is at the bottom of all carpentry and joinery. It appears first in

THE RABBET PLANE (Fig. 115)

here shown in three samples of its simplest, narrowest form, with its blade set, not as usual at right angles to the stock, but askew, to avoid tearing soft woods. It is so narrow that it must discharge its shavings through side holes, and its "fence" is a down-step of the sole, which clears the board edge, slides along outside it, and so regulates the width of the cut.

A large group of these little, narrow, corner-cutting planes, identical in purpose, vary considerably in make. In some, the blade, as an exception, is set at right angles. In some, a shoulder (the stop), appears on the stock side to halt the down-cut; but as others lack such stops, the depth of the cut is then left to the judgment of the workman. In many, the blades are sharpened to cut only downward; in others, also on one (the forward side); or, both ways; while the shavings in some escape from the right, in some from the left, and in others from both sides of the stock.

Another variety of the rabbet plane appears in the

MOVING FILLISTER (Fig. 116)

a name, according to the *New English Dictionary*, of unknown origin. It is used for cutting wider notches, overlaps and panel inserts. The blade is set askew and sharpened on both side and bottom, and as the stock is much wider, the shavings escape through its middle. The conspicuous "fence" moves, *i.e.*, it is not fast upon the sole, but adjustable on slotted screws so as to widen or diminish the breadth of the cut, and an adjustable stop on the right side of the stock, regulates the depth excavated, while also sometimes an iron tooth scores the wood just ahead of the blade, to prevent tearing in cross-grain rabbeting.

Very different in appearance from the common little side-hole rabbets (Fig. 115) and used for special extra-wide or extra-placed notches, whether constructive or ornamental, these latter, heavy fillister planes, often home-made in the 18th century, also vary among themselves in outward appearance and plan of adjustment. Many stop on the sole, some on sliding pegs. Others lack stops altogether, and some, as if to puzzle the student and contradict the name, have no "fences," in which case, straight strips must be nailed upon the stuff to guide them. Many lack the routing teeth, above mentioned, and though most are sharpened (basilled) to cut on the side as well as bottom, some cut only on the bottom. Nevertheless, these differences among themselves, and between them and the common rabbet (Fig. 115), are secondary variations adapted to the grain, wood, position, etc. To attempt to illustrate them in detail would not help matters, but rather confuse the subject. Their principle of construction is always explained by their purpose, which is to plane an accurate notch, of fixed depth and width, on or near the edge of a board.

While these notch-cutting or rabbet planes, as above mentioned, enable one board to overlap at a level upon another board, similarly notched, two boards may also fit together, if a tongued edge on one, enters a grooved edge or channel on the other, hence two other ancient fitting planes, called the plow and the tongue, were well known, according to Moxon, in the 17th century.

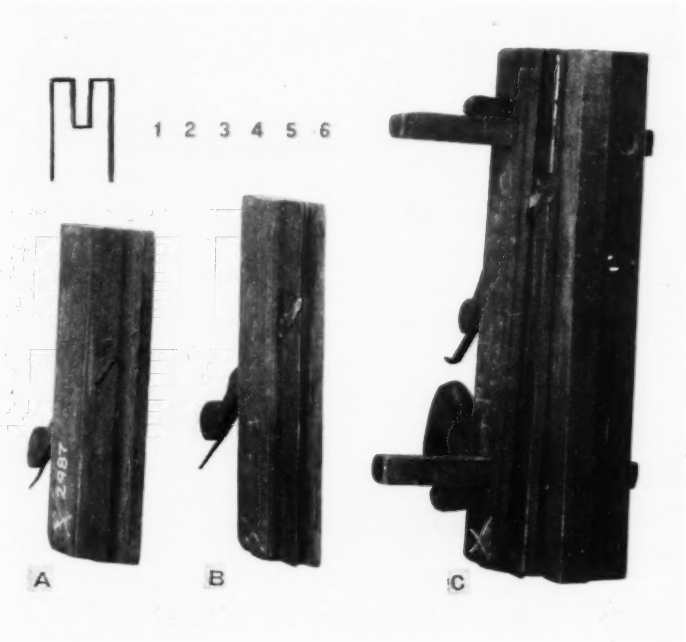


Fig. 117.—The Plow

Illustrated as a very important plane in Moxon (1678), Diderot (1768), and in *Circle of Mechanical Arts* (1813), for cutting the narrow fitting-channel (shown in outline above (A),) on the edges of boards. (A) and (B) show its simplest varieties in which the very narrow blade extending like a tooth for the entire depth of its cut is "shouldered," *i.e.*, thickened at its cutting end for strength, and further protected from back-bending, by a thin, iron plate fixed upon the stock to prop it from behind. In all three instruments the breadth of the tooth (11-16 inch in (B) to ¼ inch in (A) and (C) establishes the width of the cut, and the sole of the plane, acting as a stop, the normal depth of about ¾ of an inch. The offset in (A) and (B) on the left side of the sole (right side in the picture), which is held against the board edge, for the plane to slide upon, is the very important so-called "fence," which exactly spaces the distance of the excavation from the said edge; and while in (A) and (B) this fence is an immovable solid shoulder on the sole, in (C) it is a heavy adjustable strip moving on wedged pegs penetrating the stock, and hence prepared to vary the distance of the channel from a fixed margin, as, for instance, in grooving the flat surface of boards for drawer bottoms, rather than their narrow edges for floor fitting.

THE PLOW (Fig. 117) is here shown with its tooth-like projecting blade, "shouldered" for strength, that is, increasing to extra thickness at bottom, and with a "fence" as an offset of its sole. It was adapted to excavate the familiar normalized channels on board edges for floor and partition fitting, while in

THE TONGUE (Fig. 118) the deeply notched blade, also shouldered, and enclosing a notch in the stock, gauged to its work by a "fence"—offset in the sole, and stopped by the bottom of the above mentioned notch, cuts away the board edge on either side of a thin, remaining ridge or tongue measured to fit into the cor-

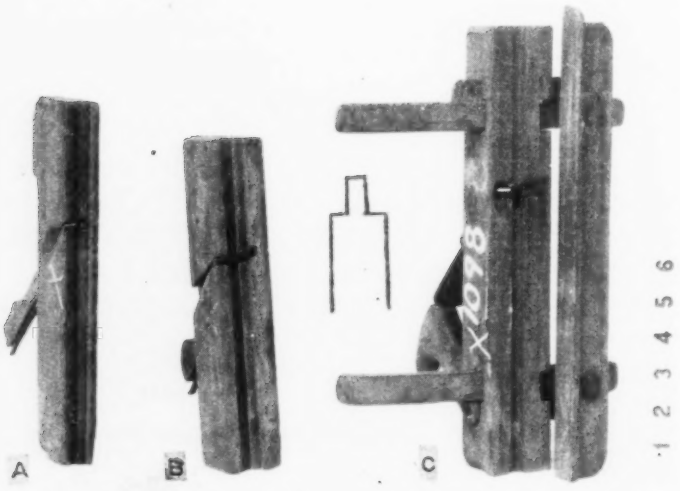


Fig. 118.—The Tongue

In this plane the deeply-notched, "shouldered" blade, enclosing a corresponding longitudinal channel in the sole, cuts away the board edge on either side of a thin, remaining ridge, called the "tongue" (see enlarged outline), intended to fit a corresponding channel called the "groove," made by the plow (Fig. 117), in flooring, partition boards, etc. In the smaller, simpler type (A) and (B), as in the plow, a solid shoulder on the left side of the sole (right side in the picture), forms an immovable "fence," while the bottom of the channel, above mentioned, stops the cut. In (C), with similar stop, the adjustable "fence" is a heavy side strip moving to and from the blade, on pegs, tightened by wedges penetrating the stock. The blades of all three instruments are single, set at right angles to the sole, and basilled to cut only downward. (A) and (B) discharge their shavings only on the right side of the stock; (C) upward through its middle, as in the bench planes. As if to save wear, regardless of weight, some of the tongue planes have their soles and their channelled bottoms and even their "fences," side-faced with iron.

responding groove cut by the plow (Fig. 117), as previously described.

Both of these planes are shown in their simple, narrow forms and also as larger, more adjustable instruments, in which the depth of the cut is regulated as above, while the "fence," movable on wedges or hand screws, permits the tool to operate on the edge of wider boards or planks, at various distances from their margins. Both were continually used when the wooden-latched battened door, was "tongued and grooved" to be hinged on its H L hinges, or when the kitchen table was topped with poplar, or when white pine floor boards, fourteen or more inches wide, were nailed down over ceiling or floor rafters with wrought nails.

As a variety of the plow, a still more comprehensive instrument called

THE BANDING PLANE (Fig. 119)

was adapted by shifting "fences" or stops, or extra, nailed-on "fences," and

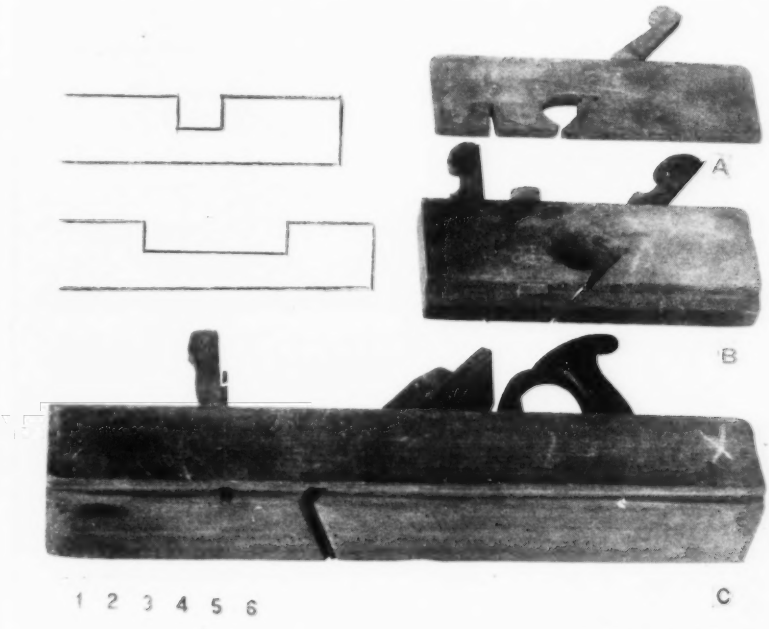


Fig. 119.—The Banding Plane

These grooving planes differ from the plow, not in purpose but in cutting a much wider groove. Not for tongue- and groove-fitting along the narrow margins of a board, but for special purposes upon its flat surface; hence their wider blades no longer need the long, iron back-prop, so conspicuous in the common plow (Fig. 117). The little specimen (A) probably intended to cut grooves at odd places for shelf inserts in cabinets, etc., lacks a stop, so that the depth of the groove is left to the workman's judgment. Moreover, as it might be required to cut across the grain, the blade is preceded by a little, double-toothed, vertically-set, iron blade, the router (here missing), to scrape out the channel corner and prevent tearing. The similar plane (B) shows the router in place, and is equipped with a sliding peg stop, entering the offset on its sole, adjustable on a transverse screw (not seen). In the heavy (C), probably intended for the insertion of heavy shelves, the single, router tooth precedes the blade on the left side only of the instrument, while offsets in the sole, on either side of the blade, effectively stop the depth of the cut. In (A) and (B), the shavings are discharged through the sides; in (C) upward, through the middle of the stock. In (A), the narrow blade is set at right angles to the sole; in (B) and (C), askew. In (C), the wide iron is not "shouldered" for strength, like the narrow blades of (B) and (C). All three instruments lack "fences," hence, to guide them, a strip must be tacked at the right place upon the surface worked upon.

The enlarged outlines illustrate the grooves cut.

routing teeth, etc., to cut much broader channels on the surface of the board, at greater distances from its narrow edge, either with or across the grain, for the insertion of book shelves, drawer bottoms, etc., or more rarely for ornament. But we are not done yet with the plow, for a still further peculiar variety of the same channeling instrument (not shown) in use in England in 1850, was known as

THE OLD WOMAN'S TOOTH

in which a wide block, fenced to slide

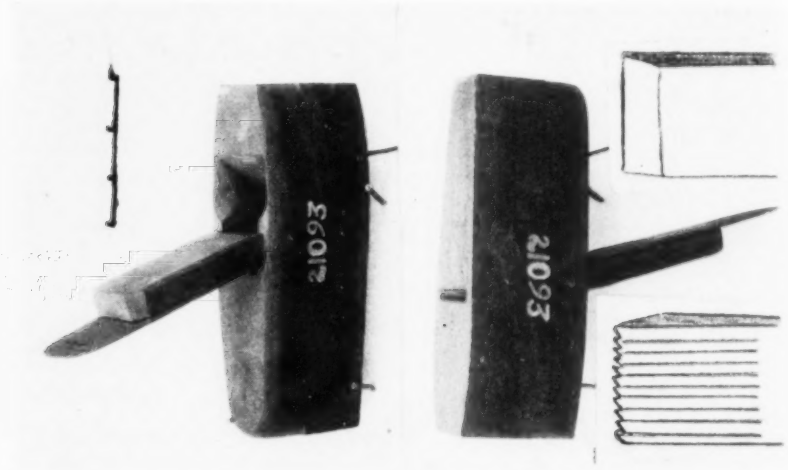


Fig. 120.—The Toothing Plane

This little 6¾ inch long instrument is constructed and shaped like the smoothing plane (Fig. 105). The very long single and shouldered "iron," smith-stamped "Newbould," is "pitched" about 22 degrees higher than usual, or more than 65 degrees above the horizontal. This basilled "iron," 1½ inches wide, is notched with 33 minute side-raked notches, each notch coinciding with a groove on the flat blade surface, as shown in the enlarged outline. The wedge is notched as usual, and held in side channels. The front of the wooden stock is stamped "Butler Philad." The plane constructed to roughen wooden surfaces for glueing veneers thereon, was used between 1820 and 1860, by Charles J. Wister of Germantown.

over a mortise hole, leveled the bottom of the latter by means of a deep, projecting, prong-like blade. A still further and now rare variety of the same tool, which the writer has found with difficulty for illustration, was known as

THE TOOTHING PLANE (Fig. 120)

in which the serrated blade scratches the surface of a slab of veneer to help the glue to stick, and in the

GAUGE PLANES

not shown, a knife or scoop "router," set in a stick and fenced by a sliding block like the carpenter's gauge, enabled the joiner to slice veneers or cut notches for marquetry inlay, at given distances from fixed margins. They are best typified by an extraordinary cooper's plane known as

THE CROZE (Fig. 121)

in which instrument, a very large semi-circular "fence," distorting the tool almost beyond recognition, holds the blade to its work when the cooper uses it, to ream out the semi-circular channel for barrel heads.

To end the subject of fitting planes, it may be said in general or repeated for the sake of clearness, that the notches, etc., which they cut, generally appearing on the narrow edges of boards, always required some kind of a "fence," whether rigid or adjustable upon the plane, or nailed upon the stuff, to regulate their distance from a fixed margin,

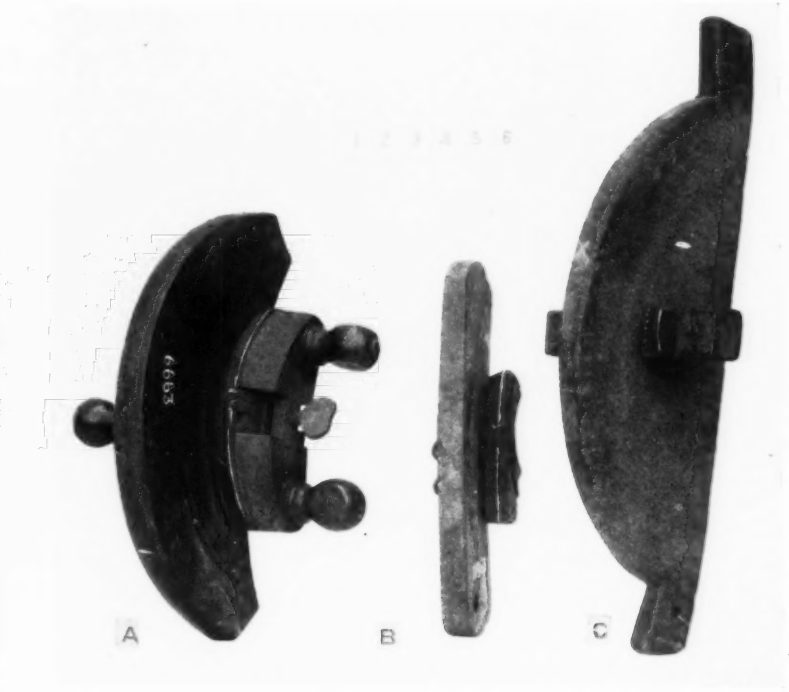


Fig. 121.—The Croze

For comparison with the carpenter's plow, this celebrated instrument of the cooper, for plowing out the channel for barrel heads (itself called the "croze"), is here shown in three of its variations. In (A), the movable wooden stock, V-shaped in cross-section and convexed longitudinally, is iron-rimmed at its apex. It is adjustable on wooden hand screws penetrating the remarkable "fence," a large, flat, semi-circle of wood, which latter is held horizontally on the barrel rim, as the instrument, pushed around the close-set stave tops, across the grain, cuts the needed circular groove to receive the barrel head. The triple blade, consisting of two routing teeth preceding a plow tooth, would not finish the job, for it would only cut a rectangular notch too narrow for the purpose, hence the croze (B). In this variety, the iron stock, shaped and fenced as before, is immovable. It is equipped with a single V-shaped blade which would open the channel already cut to the required size and wedge shape. (C) is a primitive version of (A) in which a little toothed saw, protruding from a single sliding peg, fenced as before, makes a preliminary channel which must be afterwards widened by the instrument (B).

and that the irons were not doubled as in the bench plane. Furthermore, that sometimes, where the cut is far removed from a corner, no "fence" appears on the plane, in which case the "fence" must always be nailed down across the stuff in the form of a separate strip; and finally, that because of the varying grains of different woods and because some of these planes must cut not only with, but across the grain and on the side, as well as the bottom of the blade, many of the said blades, unlike those of the bench planes, are set askew or, to further prevent tearing, preceded by vertical teeth that "rout"

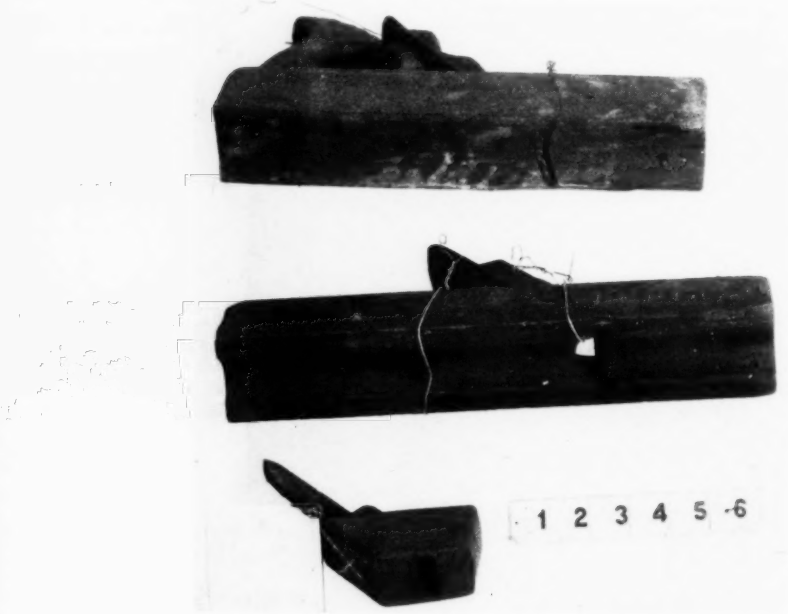


Fig 122.—The Fork Staff or Hollow Plane

This instrument, with its sole concaved (in cross-section) and enclosing a blade curved to match (in its larger size above) will round off a tool handle, or a small post, or banister rail, etc. In its smaller size, as the little, extra wide-mouthed specimen (lower), worked in all directions, it will smooth down rotundities in furniture, etc., for the cabinetmaker. The middle plane, by means of its rounded-corner blade-extension, would reduce and flute on either side an already rounded cylinder or bead moulding. All three planes lack stops and all, except the latter, will work freely, longwise with the grain, on cylindrical surfaces.

A small fork staff plane bought by the writer with some whaleship cooper's tools in New Bedford, Mass., in 189-, has its sole covered with a sheet of copper or brass bent upward and held fast under wooden strips rivetted against its sides.

the notched corner ahead of the blade.

Thus far the planes examined appear as constructive tools only. The next pictures illustrate a very large and varied group, no longer absolutely necessary for the builder's purpose, but interesting to house decorators and furniture collectors as having produced the grooved fillets and ornamental mouldings of colonial times. These are known as the

Moulding Planes

which in their simpler form appear in the next two illustrations as

The Fork Staff or Hollow Plane (Fig. 122)

with the sole concave in cross-section and with concave, hollow blade to match, used to round longitudinal, convex surfaces, such as stair rails, etc., and as its ill-named complement

Fig. 123.—The Convex or Round Plane

This rarely used plane, with central shaving discharge, sole-convexed in cross-section and with blade to match, works freely, lengthwise with the grain, to round the inside of wooden gutters or to deepen mouldings already cut. With its reverse, the fork staff or hollow plane (Fig. 122), it illustrates the class of planes called "hollows and rounds."

THE CONVEX OR ROUND PLANE (Fig. 123)

with its sole convex in cross-section, enclosing a convex blade, which reverses the work of the fork staff by cutting or widening large cylindrical, concave grooves, or, if ever used for practical purposes, the inside of wooden troughs.

But far beyond the simple work of these so-called "hollows" and "rounds," moulding planes for pure ornament, appear in a vast number of elaborate forms. They are reasonably typified by

THE MOULDING PLANE (Fig. 124)

a little instrument with a variously grooved blade which, discharging its shavings on the side, and fenced and stopped by offsets in its sole, moulds the edge of a table top, etc., or beads the corner of a ceiling rafter or beautifies a door panel.

THE MOULDING PLANE (Fig. 125)

a larger instrument, with central shaving discharge, fenced and stopped as before, either pushed by one man, or pushed by one and pulled by another, puts the would-be classic touch along the board edge in wider mouldings for wall, fireplace or cornice.

At this point we halt before a vast, collected variety of decorative instruments, which in make, adjustment and blade contour, seem to have no end. Many of them may be dated reasonably by the changing fashion in house and furniture mouldings, revealed by their blades. Sometimes, to the confusion of the student, it appears that one plane will not finish the cut. Then one or more others must follow it to perfect imperfect curves, or, like the "snipe's bill," with side-curved tooth, to undercut them. Without attempting to examine or discuss their endless variations or names (ogee, ovolo, cavetta, astragal, etc., etc.), or "fence" or stop equipment, we can understand

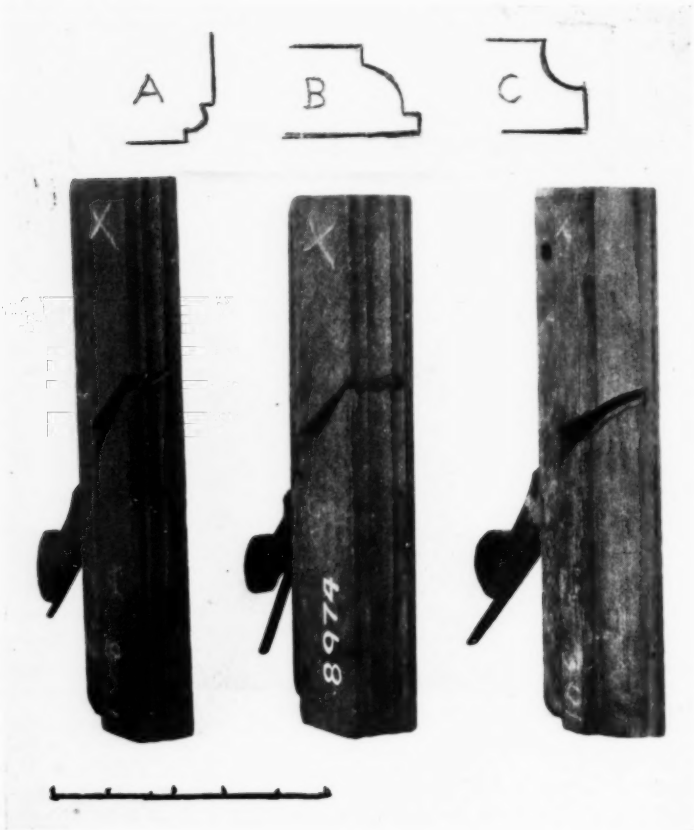


Fig. 124.—The Moulding Plane

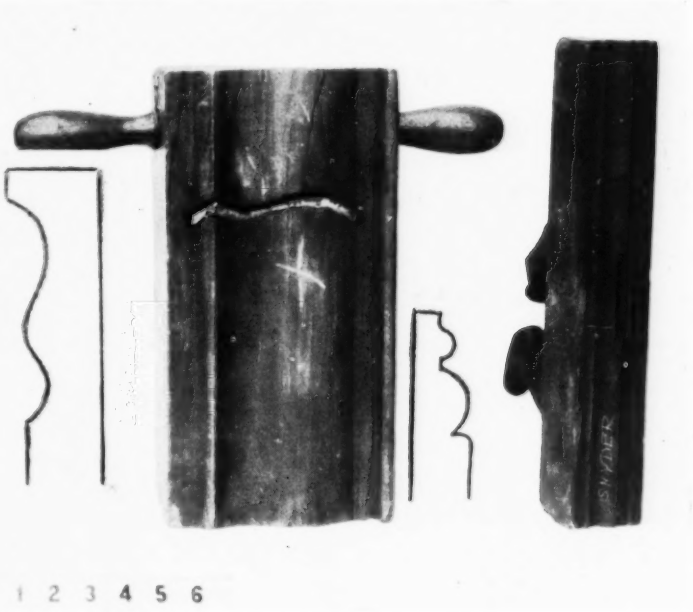
In these three small examples of the moulding plane, the curved, basilled blades, sharpened with files and special whetstones, conform to the flutings of the sole, which flutings, at their thinnest projections, are often reinforced by inserted strips of box- or hard wood. Offsets in the sole (to the left in the pictures) form the stop; to the right, the fence. The familiar outlines, next above each plane, show the mouldings it produces.

all and explain any of them, if we fix our attention upon their purpose rather than their shape.

To conclude the subject of planes, the next illustration shows a celebrated instrument far outrivaling in prevalence all other tools of its class, which may be said to be not only ornamental but constructive, namely

THE SASH FILLISTER OR SASH PLANE (Fig. 126)

in which a rabbet plane, cutting a corner notch, and a moulding plane, cut-



1 2 3 4 5 6

Fig. 125.—The Moulding Plane

While the little moulding planes shown in Fig. 122, decorate often only the narrow edge of boards when edged up in the vise, these wide and often heavy instruments cut broad mouldings on the flat face of boards. In the cumbersome, two-man instrument (left), a second workman pulls the transverse peg handles, while the first pushes the "tote" (not seen). The offset, screwed fast on the side of the stock, is the "fence," and the right sole margin, beyond the blade (left in the picture), the stop. The plane cuts the out-line next it on the flat side of a board. The smaller, one-man plane (right), fenced by the solid, left offset in its sole (right in the picture) and stopped as before, cuts the smaller outline.

Both instruments, like others of their variety, discharge their shavings not sideways, but upward, through a central hole in the stock. To save wear or breakage, many of the wooden ridges following the blade curvature of these planes, have been replaced or reinforced with entire strips, or as in the right plane, by inserts of boxwood, one of which has fallen out.

ting a "quarter round," are adjustably held together by handscrews, so as to straddle and double-corner a strip of wood on both sides and by two planing operations at once, thereby shaping it into the well-known, glass-holding framework of the common colonial window sash which, to this day, has preserved its contour of two hundred years ago.

From an artistic point of view, the old moulding planes claim attention as having by means of decorative cornices, chair rails, door, wall and fireplaces, so greatly beautified the houses and furniture of the 18th century. Diderot illustrates (1768) French mouldings, often undercut and far more elaborate than any seen by the writer in old American houses, or which could have been produced by observed planes.

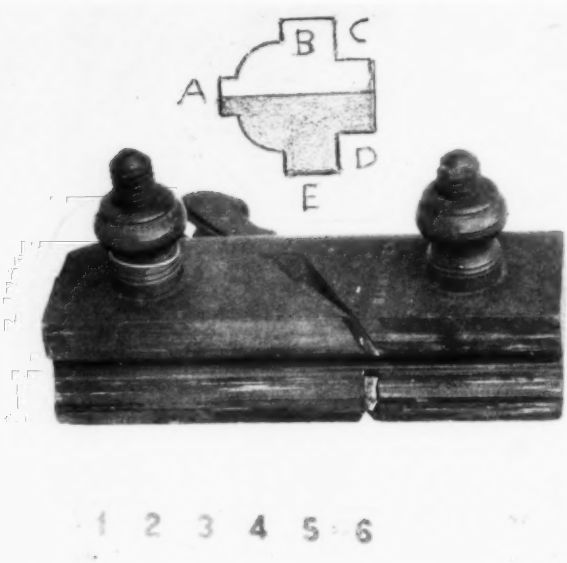


Fig. 126.—The Sash Fillister or Sash Plane

Two planes, namely, the rabbet (upper) and the ovolo moulding (lower), are set together on hand screws forming a single instrument, which, when pushed along the edge of a board, clamped edge-upward in the carpenter's vise, will cut the outline A B C thereupon. Then, when the board is released and ripped into a long strip on the line of E, and replaned in reverse into the outline A E D in cross section, the strip becomes the style or muntin of a common window sash in which the outline B A E faces indoors, with the opposite side notched for the glass and putty at C D, fronting the weather.

But the day of the moulding plane passed seventy years ago. The evidence shows that it reached its climax at the beginning of the 19th century, when, as listed by the *Circle of Mechanical Arts* (1813), and Rees's *Encyclopedia*, and as shown by collected examples, a far greater variety of these hand instruments existed, whether home-made or factory-made, imported or domestic, or improved by English or American patents, than Moxon pretends to describe or mention. It was between 1830 and 1860, that wood-working machinery (planing mills) put them all out of general use.

By a reasonable number of photographs, we have hoped, not to illustrate their endless variations, but to save the reader a headache by explaining their purpose, which is a key to their construction in every case.

As a supplement to the great surfacing tools above mentioned, consider last

The Wood Rasp (Fig. 127)

the *scobina* of the Romans, mentioned in 1678 in the *Essex County* (*Mass.*) *Court Records*, a heavy, steel file, often surfaced with round burrs punched upon it by the blacksmith, for finish-

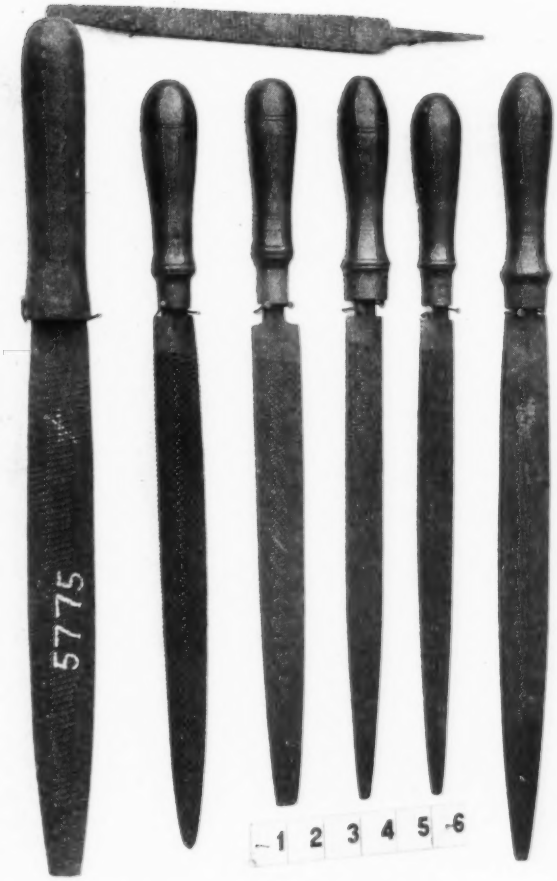


Fig. 127.—The Wood Rasp

Mounted with a wooden handle driven upon its tang or thin, pointed haft-end, the ancient *radula* of the Romans, overlooked by Moxon, resembles in appearance a common, metal worker's file, though it often differs in the make of its teeth. These, though sometimes (two right specimens) cut by the blacksmith in close parallel lines, as in files, to file metal, are generally, as in all the other specimens here shown, punched up into burrs to reduce or round off the rough edges of tool handles, etc., in wood. The handled files of date *c.* 1830, are from the large store of tools, preserved by the Wister family, at their colonial house, known as "Grumblethorpe" in Germantown, Pa., as amateur relics of Charles J. Wister (born 1782, d. 1865). They were presented to the Doylestown Museum, July, 1925, by his descendants, Owen Wister and Alexander W. Wister. The upper rasp was made by Seth Nelson, mountaineer artificer of Clinton County, Pa., about 1880.

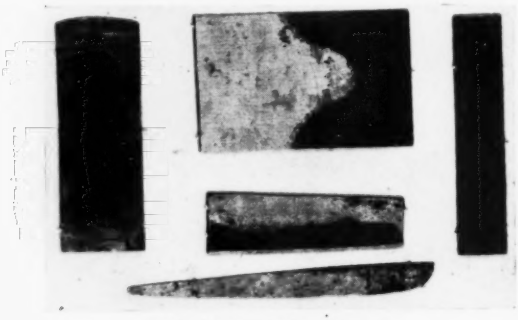


Fig. 128.—The Scraper.

The sharp-edged tablet of steel, here illustrated by five examples, and now (1925) sold as a factory-made tool at hardware stores, is the *radula* of the Romans, though neither Moxon nor Diderot mention it. It must have survived through the Middle Ages as a joiner's and carpenter's tool, to remove paint or varnish and to follow the plane over rough places in knot holes, etc. J. Stokes, *Complete Cabinetmakers' and Upholsterers' Guide*, London, 1829, says that the English carpenter made it for himself with the cold chisel, out of broken saw blades held in a vise, square-edged on a grindstone and then sharpened on a Turkey stone. The four rectangular specimens were loaned for this illustration by Oliver Holbain, cabinetmaker of Doylestown, and were made by him and used about 1905 to 1910.

ing round-surfaced tool handles, etc., and the very effective

SCRAPER (Fig. 128)

This is the Roman *radula*. A hundred years ago, according to J. Stakes, *Complete Cabinet Maker's Guide*, London, 1829, it was cut with a cold chisel out of saw blades and made sharp on a "Turkey stone" (oiled whetstone), and is sometimes still so made and used by the joiner to follow the plane over knotty surfaces. The common

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otherwise called glass or emery paper, not found in home-made form by the writer, and not here shown, is now a factory-made, store-bought product and as part of the shop stock of every carpenter, is a universal and very efficient agent for smoothing all kinds of woodwork. Yet, Moxon (1678), who describes the smoothing and polishing of wood and iron in the turning lathe, with a piece of seal skin or the frayed end of a Dutch reed, does not mention it. Neither does Dr. Johnson's *Dictionary* (1754). But Martin's *Circle of Mechanical Arts*, London, 1813, speaks of "glass paper" seal skin and Dutch reed as used with the turning lathe; the *New English Dictionary* quotes "emery paper," in 1772, and J. Stakes' *Complete Cabinetmaker's Guide*, London, 1829, tells the joiner how to make "glass paper" by sprinkling glass on glued cartridge paper.

(*To be continued*)